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United States Department of Agriculture

BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE

SERVICE AND REGULATORY ANNOUNCEMENTS

APRIL-JUNE 1939

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QUARANTINE AND OTHER OFFICIAL ANNOUNCEMENTS

ANNOUNCEMENTS RELATING TO JAPANESE BEETLE QUARANTINE
(NO. 48)

B. E. P. Q. 498 (supersedes B. P. Q. 352).

ADMINISTRATIVE INSTRUCTIONS—DEFINING THE TERM “COMMERCIALY PACKED”
AS APPLIED TO SHIPMENTS OF APPLES OR PEACHES UNDER THE JAPANESE
BEETLE QUARANTINE REGULATIONS

MAY 27, 1939.

Regulation 5 of the Japanese beetle quarantine regulations (sec. 301.48-5) exempts from certification “commercially packed apples or commercially packed peaches in any quantity” except those moving via refrigerator cars or motor-trucks from the special area listed in paragraph (1) of that regulation.

In interpreting this exemption the term “commercially packed” will include:
(a) All apples or peaches in closed barrels, boxes, baskets, or other closed containers.

(b) Apples or peaches in open packages when such fruits have been graded in accordance with the official standards for apples or peaches promulgated by the United States Department of Agriculture or in accordance with any official grades authorized by the State in which the apples or peaches were grown and when the containers are marked with such grade. The so-called Unclassified Grade is not, however, considered a grade within the meaning of this definition, and apples or peaches in open packages so marked are not considered commercially packed. (Sec. 301.48-5a, issued under authority contained in sec. 301.48-5.)

LEE A. STRONG,
Chief, Bureau of Entomology and Plant Quarantine.

B. E. P. Q. 499.

ADMINISTRATIVE INSTRUCTIONS TO INSPECTORS ON THE TREATMENT OF NURS-
ERY PRODUCTS, FRUITS, VEGETABLES, AND SOIL, FOR THE JAPANESE BEETLE

JUNE 9, 1939.

Existing methods authorized for the treatment of sand, soil, earth, peat, compost, manure, nursery stock, fruits, and vegetables for the elimination of the Japanese beetle have been revised and consolidated in these instructions. Methods outlined herein are to be employed as a basis of quarantine certification under regulations 5, 6, and 7 (secs. 301.48-5 to 301.48-7) of Quarantine No. 48, revised (sec. 301.48). The issuance of these instructions cancels the methods of treatment prescribed in B. P. Q. 359 and its four supplements, B. E. P. Q. 473, B. E. P. Q. 475, and B. E. P. Q. 480.

While no guaranty can be given that no injury will be caused to the commodity, the treatments are recommended only for those commodities which experience has shown were not seriously injured. It must be understood by the nurseryman and shipper that no liability shall attach either to the United States Department of Agriculture or to any of its employees in event of injury. The inspector must bring this condition of treatment and the facts in reference to the use of the chemicals to the attention of some responsible person at the nursery or shipping point before the treatments are applied.

Inspectors must familiarize themselves with cautions for each chemical.

GRADES REQUIRED AND CAUTIONS ON THE USE OF
AUTHORIZED CHEMICALS

The chemicals authorized for the treatment of soil, nursery stock, fruits, and vegetables, especially carbon disulfide, carbon disulfide emulsion, ethylene oxide, hydrocyanic acid, and methyl bromide, are dangerous and proper care must be exercised in handling them. The facts in reference to these chemicals must be brought to the attention of some responsible person at the nursery or shipping point before the treatments are applied.

(a) *Carbon disulfide*.—A technical, C. P., or U. S. P. grade is required. It should be stored in tight drums or cans in a cool, dry place.

The vapor of carbon disulfide is inflammable and explosive. At a temperature of 297° F. it may take fire spontaneously and in the presence of certain metals, particularly copper, it may ignite at considerably lower temperatures. It must be kept away from fire, and from hot objects such as electric-light bulbs, unprotected brush-type motors, steam pipes, etc. Lighted cigars, cigarettes, or pipes must never be brought near carbon disulfide.

Carbon disulfide is a blood poison, but poisoning by this chemical is rare. Exposure to the vapor may cause giddiness and headache. When these symptoms develop, the individual should get into the open air.

(b) *Carbon disulfide emulsion.*—The required carbon disulfide emulsion consists of carbon disulfide, meeting the above requirements, mixed with an equal volume of a castor-oil-soap emulsifier which has been prepared according to the directions published in the *Journal of Industrial and Engineering Chemistry*, volume 20, pages 849–850, August 1929.

The carbon disulfide and the castor-oil-soap emulsifier should be obtained in separate containers. The emulsion must never be prepared in a large quantity. It should be prepared in the field as it is used. In preparing the stock emulsion, equal volumes of carbon disulfide and the emulsifier are mixed. This stock emulsion, when diluted with the required amount of water, forms the treating solution.

Carbon disulfide emulsion, even after dilution, is inflammable. The precautions given for handling carbon disulfide must be observed.

(c) *Ethylene oxide.*—A technical, C. P., or U. S. P. grade is required.

The vapor of ethylene oxide is inflammable and explosive. It must be kept away from fire, and from hot objects such as electric-light bulbs, unprotected brush-type motors, steam pipes, etc. Lighted cigars, cigarettes, or pipes must never be brought near ethylene oxide.

Ethylene oxide is not highly toxic to man. Continued exposure to the vapor may cause giddiness and headache. When these symptoms develop, the individual should get into the open air.

(d) *Hydrocyanic acid.*—Commercial liquid hydrocyanic acid, 96 to 98 percent HCN, or this material absorbed on fiber discoids (which are divided into two units, each comprising a series of discoids held together in the form of a chain) in a can containing 6½ ounces of HCN, or calcium cyanide, 88 percent pure, are required. The cylinders and cans of these cyanide products should be stored in a cool, dry place.

Gaseous hydrocyanic acid is inflammable and explosive. All fire and unprotected brush-type motors must be kept from contact with the gas. Lighted cigars, cigarettes, or pipes should never be carried. In addition it is known that liquid hydrocyanic acid undergoes decomposition on long storage in a closed container. It is advisable that only sufficient of these cyanide products be procured for the season's work. The residue left after fumigation with calcium cyanide is dangerous and great care must be exercised in disposing of it.

Hydrocyanic acid is a violent poison. Inhaling hydrocyanic acid gas or absorbing it through the skin is very dangerous and must be avoided. A suitable gas mask and rubber gloves must be worn at all times when handling hydrocyanic acid, or calcium cyanide, and when opening the hatches of fumigated cars for aeration. If it is absorbed by the system, prompt action may prevent serious consequences. The established principles of first aid in HCN poisoning are: (1) Induce continued heavy breathing of fresh air by artificial respiration, using the Shaefer (prone pressure) method; (2) neutralize the gas poisoning with weak ammonia fumes or aromatic spirits of ammonia; (3) call a physician. Small bottles of ammonium carbonate, as the source of ammonia fumes, should be readily available as an inhalant at all times.

(e) *Lead arsenate.*—Lead arsenate which satisfies the standard requirements of the chemical for use as an agricultural spray is required. It should contain at least 30 percent of arsenic pentoxide, and not more than 0.75 percent of water-soluble metallic arsenic. It should be obtained in powdered form to which no sticklers have been added. Lead arsenate should be stored in a dry place that is not accessible to animals.

Lead arsenate is poisonous to man and animals. When applying the material, the worker should wear gloves to protect his hands, since the poison may be absorbed into the system through cuts and abrasions of the skin. The worker should keep his hands away from his mouth at all times while handling the material and be sure to wash thoroughly before eating. If absorbed by the system, call a physician, give an emetic such as warm water and mustard, and give milk or white of egg.

(f) *Methyl bromide*.—The commercial grade is required. Containers of methyl bromide should be stored in a cool, well-ventilated place. Avoid leakage by seeing that the valves on the cylinders are tightly closed.

Methyl bromide is a gas at ordinary temperatures. As it has only a very slight odor, toxic concentrations of methyl bromide may be encountered and the persons so exposed may be unaware of the danger. While methyl bromide is not so toxic as hydrocyanic acid, it is dangerous to inhale the gas or to get the liquid in contact with the skin. Rubber gloves should be worn while releasing the liquid methyl bromide either from cylinders or applicators. CAUTION.—Rubber gloves absorb methyl bromide which may result in skin injury if they are worn continuously.

(g) *Naphthalene*.—Flake naphthalene, free from tar, is required. Naphthalene is not explosive and it burns only with difficulty. It is advisable, however, to keep the material in the solid and gaseous form away from fire.

Long exposure to naphthalene may cause giddiness and headache. When these symptoms develop, the individual should get into the open air.

(h) *Paradichlorobenzene*.—A technical or C. P. grade of small- to medium-size crystals is required.

Paradichlorobenzene burns only with difficulty. It is advisable, however, to keep the material from fire. Long exposure to the gas may cause giddiness and headache. When these symptoms develop, the individual should get into the open air.

TREATMENT OF SOIL IN ABSENCE OF PLANTS

(i) POTTING SOIL

Potting soil must be treated by the use of heat, carbon disulfide, naphthalene, or lead arsenate.

Fumigated or heat-treated soils should be aerated to remove excessive fumigant or heat before using for potting plants. When stored, the soil must be kept and handled in such a manner as to prevent reinfestation. When stored for a long time, without aeration, it is advisable to thoroughly mix the upper and lower layers in the bin. When used as recommended, these treatments do not impair the fertility of the soil.

Lead arsenate treatments are more limited in their application because of the susceptibility of some nursery plants to arsenical poisoning. E-418 of the Bureau of Entomology and Plant Quarantine gives some information on the susceptibility of nursery plants to lead arsenate in the soil.

(1) Heat treatment

Condition and type of soil.—Soil of any type may be treated, provided it is friable.

Temperature.—The soil must be heated throughout to 130° F.

Period of treatment.—The temperature of the soil must be maintained at 130° F. for 30 minutes.

(2) Carbon disulfide fumigation

Equipment.—A gastight bin or box is required. It is necessary to have the top, sides, and bottom tight.

Condition and type of soil.—Soil of any type may be fumigated, provided it is friable and thrown loosely into the bin or box. Wet soil must never be fumigated.

Temperature.—The temperature must be at least 45° F. when the fumigant is applied and must not fall below 40° during the course of the treatment.

Dosage.—One pound (352 cubic centimeters) to 1 cubic yard.

Application.—One method is to apply the fumigant while the soil is being put into the bin or box. Place 18 inches of soil in the bin or box. Inject carbon disulfide at the rate of 176 cubic centimeters for each square yard of surface, distributing the material uniformly in holes 2 inches deep and 18 inches apart, using 44 cubic centimeters to each hole. Fill the holes with soil immediately after the liquid is injected. When the first 18 inches of soil have been treated, put in 18 inches more and repeat the operation. This can be repeated until the container is filled.

Another method is to apply the fumigant after the box or bin has been filled. This is done by making holes from the surface to the different levels, so that the carbon disulfide is applied in the same positions as by the first method. The liquid, in this case, must be poured into the deep holes through a tube, or injected to insure that it reaches the proper level.

Period of fumigation.—The box or bin must be sealed and left undisturbed for 48 hours.

(3) *Naphthalene fumigation*

Equipment.—No special equipment is necessary. It is not necessary to cover the soil.

Condition and type of soil.—Soil of any type may be fumigated, provided it is friable. Wet soil must never be fumigated.

Temperature.—The temperature must be at least 50° F.

Dosage.—Five pounds to 1 cubic yard.

Application.—The fumigant must be thoroughly mixed with the soil, and the soil then placed in a pile.

Period of fumigation.—The soil must be left undisturbed for 1 week.

(4) *Lead arsenate treatment*

Season.—The treatment must be applied before August 1.

Condition and type of soil.—The soil must be friable. Wet soil must never be treated. The treatment is recommended only for soils that are slightly acid or neutral in reaction. Any type of soil may be treated provided it meets these requirements.

Dosage.—Two pounds to 1 cubic yard.

Application.—The lead arsenate must be thoroughly mixed with the soil.

Period of treatment.—Plants freed from soil and potted in soil treated in the above manner, by August 1, may be certified for shipment between the following October 1 and June 15.

Handling of potted plants.—When plants potted in lead-arsenate-treated soil are plunged in beds or set in frames exposed to possible infestation, the soil of these beds or frames must previously have been treated with lead arsenate at the rate of 1,500 pounds per acre.

Treated plants carried after June 15.—When plants potted in soil treated as prescribed are carried after June 15, they may be again eligible for certification between October 1 and June 15 of the second year if, on August 1 of the second year, analyses show the soil to contain lead arsenate at the rate of 2 pounds per cubic yard.

(j) SHIPMENTS OF SAND, SOIL, EARTH, PEAT, COMPOST, AND MANURE

Shipments of sand, soil, earth, peat, compost, and manure must be treated by the use of heat or carbon disulfide. The instructions given in (i) (1) and (i) (2) must be followed.

Type of car.—Tight boxcars must be used between June 15 and October 15, inclusive, and may be used at other times of the year. Open freight cars, of the steel gondola type, may be used between October 16 and June 14. In cars of this type, with dump bottoms, planks must be laid on the bottoms and covered with heavy paper, in a manner approved by the inspector.

Doors.—The doorways of boxcars must be boarded up and covered with heavy paper up to a point beyond the height of the sand, soil, etc. Certified cars must have the doors closed and fastened while en route within the regulated area.

Depth of sand, soil, etc.—In boxcars, the sand, soil, etc., must not be loaded to such a depth as would restrict the overhead working space and hamper the work of the men applying the treatment. In the open-type cars, the material should not be piled above the sides of the car.

Covering with canvas, etc.—When open-type cars are used, canvases or heavy paper must be used to cover the surface as the treatment is applied. These covers must be free from holes and a foot or more wider than the width of the car. Where several pieces are used, they must be large enough to allow for overlapping at least 1 foot. The covers must be fastened down at the sides of the car and weighted on the surface, particularly where they overlap.

(k) SOIL IN AND AROUND COLDFRAMES, PLUNGING BEDS, AND HEELING-IN AREAS

Soil in and surrounding coldframes, plunging beds, heeling-in areas, etc., must be treated with lead arsenate, except, under special conditions, when the inspector may authorize the use of heat, carbon disulfide, carbon disulfide emulsion, or naphthalene. With the exception of lead arsenate, the treatment must not be applied when adult beetles are present. An exception may be made in the case of beds protected from beetles.

Safety zone.—In addition to the area desired to be certified, a strip 3 feet wide must be treated around the entire coldframe, plunging bed, or heeling-in ground. No plants will be certified from this strip. In the case of coldframes, etc., extending into the ground to a depth of 12 inches or more, no safety zone is required.

Marking.—In the case of coldframes, etc., having fixed boundaries, proper designations will be made on them by the Department representatives. In all other cases the nurseryman shall furnish suitable stakes, at least 4 inches square and 30 inches long, to be placed at the boundaries of the certified plots and marked by the Department.

(1) LEAD ARSENATE TREATMENT

Season.—The treatment must be applied before August 1 if the land is to be used in the fall.

Condition of soil.—The soil must be friable and in good tilth.

Dosage.—Thirty-five pounds to each 1,000 square feet, or 1,500 pounds per acre. For subsequent re-treatments, the quantity required to restore the original concentration, as determined by chemical analyses, must be applied.

Application.—The lead arsenate must be thoroughly mixed and incorporated with the upper 3 inches of soil.

Period of treatment.—Plants must not be placed on or in the soil thus treated until after October 1.

(2) HEAT TREATMENT

Hotbeds, equipped with steam pipes or electrical resistance coils in the soil, may be treated by heating the soil to at least 130° F. and maintaining this temperature for 30 minutes.

(3) CARBON DISULFIDE FUMIGATION

Equipment.—A heavy paper or other gasproof cover must be provided to cover the soil during the fumigation period.

Condition of soil.—The soil must be friable and in good tilth. A wet soil must never be treated.

Temperature.—The temperature of the soil at a depth of 6 inches must be at least 45° F. when the fumigant is applied, and must not fall below 40° during the period of treatment.

Weather conditions.—The ideal conditions are a warm, humid atmosphere without wind.

Dosage.—Six pounds (2,100 cubic centimeters) to 100 square feet of surface.

Application.—Carbon disulfide must be uniformly distributed over the surface of the bed, plot, or heeling-in area. Apply it in holes 12 inches apart and 1 to 2 inches deep, putting 21 cubic centimeters into each hole. Fill each hole with soil immediately after the liquid is poured. Cover each section as soon as the fumigant is applied.

Period of treatment.—The soil must remain covered for 48 hours.

(4) CARBON DISULFIDE EMULSION TREATMENT

Equipment.—Suitable tanks, barrels, or tubs for preparing the emulsion and 24-gage galvanized-iron collars 10 inches wide and not more than 4 feet square, for applying the treatment, must be provided.

Condition of soil.—The soil must be friable. The surface must be level and not disturbed by recent cultivation. Drainage conditions must be such that the solution does not disappear from the surface in less than 10 minutes or more than 5 hours.

Temperature.—The temperature of the soil at a depth of 6 inches must be at least 45° F. when the treatment is applied, and must not fall below 40° during the period of the treatment.

Dosage.—Two and one-half gallons of dilute emulsion to each square foot. The concentration is dependent upon the temperature. Follow table 3 of paragraph (m) (1).

Application.—Level the surface of the soil, removing weeds and debris. Force a galvanized-iron collar 3 inches into the ground, and firm the soil against the metal. Place another collar next to the first, and so on. When enough collars are in place, pour the dilute emulsion into the basins formed within the collars. As soon as the liquid has disappeared from the surface, the collar may be lifted and set in another position.

Period of treatment.—The soil must not be disturbed for 48 hours.

(5) NAPHTHALENE FUMIGATION

Condition of soil.—The soil must be friable and in good tilth.

Temperature.—The temperature of the soil at a depth of 6 inches must not be less than 50° F. during the period of the treatment.

Dosage.—Forty-six pounds to 1,000 square feet, or 2,000 pounds per acre.

Application.—The naphthalene must be thoroughly mixed and incorporated with the upper 3 inches of soil.

Period of treatment.—The soil must not be disturbed for 1 week.

TREATMENT OF SOIL ABOUT THE ROOTS OF PLANTS

The effect of insecticidal treatments on plants, when applied to soil about their roots, varies with the variety, age, vigor, and condition of the plants. It should be understood that these treatments have not been tried on all varieties of plants, or under all of the varied conditions in the nurseries. In general, it is not possible to destroy an insect in close proximity to the roots without causing some damage to the plant. While guarantees cannot be given that no injury will be caused to the plants, the treatments are recommended only for those plants which experience has shown were not seriously injured. It must be understood by the nurseryman that no liability shall attach either to the United States Department of Agriculture or to any of its employees in event of injury.

After all treatments the plants must be handled in such a manner as to prevent reinfestation.

(1) TREATMENT OF PLANTS AFTER DIGGING

(1) REMOVAL OF INFESTATION

With some deciduous and herbaceous plants, infestation can be removed by shaking and washing all soil from the roots. Only such root masses as can be thoroughly examined and absence of infestation verified may be certified by this procedure.

(2) HOT-WATER TREATMENT

Equipment.—A water tank, equipped with a suitable heating device and circulating system, must be provided.

Temperature.—The water must be maintained at 112° F., with a variation of not more than $\pm 0.5^\circ$. Before the plants are immersed, thermometers must be inserted in the center of at least three of the largest clumps, baskets, or root masses placed at each end and at the center of the tank. In addition, three thermometers must be placed in the water of the tank in the same relative positions as those in the root masses. Temperature readings from each of these thermometers must be recorded on Form No. 91.

Application.—The root masses must be immersed completely.

Period of treatment.—Seventy minutes after the root masses are heated to 112° F.

Varieties of plants.—The varieties which have been treated successfully by this procedure are given in Technical Bulletin 274.

Preparation of plants.—Large clumps should be divided as much as possible without injuring the roots. Excess soil should be removed and the roots pruned. Small plants and rootstocks may be packed loosely in wire baskets or in other

suitable containers, provided the water can circulate through the masses. Large plants must be placed individually in the water.

Care of plants after treatment.—Plants should be cooled slowly to room temperature. Pot or heel them in the ground as soon as possible after cooling. Tubers should be dry when packed. Avoid subjecting treated plants to freezing temperatures shortly after treatment.

(3) CARBON DISULFIDE EMULSION DIP

Equipment.—Watertight tanks or tubs must be provided.

Temperature.—The temperature of the dip must be maintained between 65° and 70° F.

Dosage.—Forty-five cubic centimeters of carbon disulfide emulsion to 10 gallons of water. The treating solution must be prepared immediately before using.

Application.—The root masses must be immersed completely.

Period of treatment.—The root masses must be immersed 24 hours.

Varieties of plants.—The varieties which have been treated successfully by this procedure are given in Technical Bulletin 478.

Preparation of plants.—Large clumps should be divided as much as possible without injuring the roots. Excess soil should be removed. No wet root masses or root masses measuring more than 6 inches across the narrowest dimension must be treated. The temperature of the root masses must be at least 60° F. before treatment. Small plants and root stocks may be packed loosely in wire baskets or other suitable containers, provided the dipping solution can circulate through the masses. Larger root masses must be placed individually in the dip.

Care of plants after treatment.—Tubers should be dry when packed. Avoid subjecting treated plants to freezing temperatures shortly after treatment. It is advisable to allow plants which are to be potted to stand in the open to permit evaporation of the fumigant before placing them in soil.

(4) PARADICHLOROBENZENE FUMIGATION

Season.—The treatment must be applied between October 1 and May 1.

Varieties of plants.—The following varieties of plants have been treated successfully by this procedure: *Aquilegia* sp. var. Mrs. Scott Elliott's hybrid, *Anemone hupehensis*, *Artemisia dracunculoides*, *Azalea amoena*, *A. kaempferi* vars. Cleopatra, Fedora, Othello, and Salmon Beauty, *A. hinodegiri*, *A. obtusa kiusiana* var. Coral Bells, *Aster alpinus*, *Campanula medium*, *Ceratostigma plumbaginoides*, *Chrysanthemum* sp., *Dianthus caryophyllus* var. Abbotsford Pink, *Digitalis purpurea*, *Eupatorium coelestinum*, *Helianthemum glaucum croceum*, *Iberis amara*, *Myosotis* sp., *Pachysandra terminalis*, *Phlox* sp. var. R. P. Struthers, *Santolina chamaecyparissus incana*, *Sedum acre*, *Sempervivum alberti*, *Stokesia laevis*, *Thymus serpyllum*, *Viola* sp. vars. Jersey Gem and Rosina.

Preparation of plants.—Excess soil should be removed and the mass reduced as much as possible without injuring the roots. The plant ball should be moist, but not wet. Pots must be removed from potted plants. When burlap on balled plant is of coarse weave, it may be left on the balls, but when it is closely woven, it must be removed.

Preparation of plunging soil.—The paradichlorobenzene must be thoroughly mixed with a light sandy loam, or sand, which is moist but not wet, and free from lumps, stones, and debris. It must be mixed immediately before using.

Care of plants during treatment.—If it is necessary to water the plants during the treatment to prevent desiccation, the operation must be limited to a light syringing, under the supervision of an inspector.

Care of plants after treatment.—It is advisable to avoid excessive watering of the plants after treatment in order to permit any residual gas to escape from the plant balls.

(i) Complete coverage

Temperature.—The temperature of both the treating soil and the soil ball must not be less than 50° F. during the period of treatment. To prevent injury to the plants, it should not go above 65°.

Dosage.—Ten pounds per cubic yard of mixing soil (6 ounces per cubic foot) for soil balls up to 6 inches in diameter at the narrowest dimension. Twenty

pounds per cubic yard of mixing soil (12 ounces per cubic foot) for soil balls from 6 to 8 inches in diameter at the narrowest dimension.

Application.—Spread a layer of the treated plunging soil on a smooth hard surface, such as a floor or bench, and then place a row of plants, with the balls spaced at least 1 inch apart, on this soil. Fill the spaces between the plant balls with treated soil and cover the plant balls to a depth of 1 inch. Then, place about 1 inch of treated soil against the row of plants. This operation is repeated until all the plants are plunged.

Period of treatment.—The plants must be left undisturbed for a period of 5 days.

(ii) Side application

Temperature, dosage, period of treatment.—The various combinations of dosage and exposure which may be used at different temperatures are given in table 1. It is desirable to maintain the temperature fairly constant. The temperatures given at the head of the column in table 1 are the minimum temperatures during the period of treatment.

TABLE 1.—*Temperature, dosage, and period of treatment for paradichlorobenzene*

Width or depth of plant ball (inches)	Crystals per cubic yard of plunging soil	Period of treatment ¹ required when the minimum Fahrenheit temperature is within the range of—					
		45°-49°	50°-54°	55°-59°	60°-64°	65°-69°	70°-74°
	Pounds	Days	Days	Days	Days	Days	Days
Up to 2.....	1	(1)	(1)	10	9	7	5
	5	9	7	6	5	4	2
	10	7	6	5	4	3	2
	20	5	5	4	3	2	1
2 to 4.....	1	(1)	(1)	(1)	(1)	10	6
	5	(1)	10	10	9	8	4
	10	9	8	8	7	6	3
	20	7	7	6	6	5	2
4 to 6.....	1	(1)	(1)	(1)	(1)	(1)	(1)
	5	(1)	(1)	(1)	(1)	(1)	(1)
	10	(1)	(1)	(1)	(1)	9	7
	20	(1)	(1)	8	7	6	4

¹ Exposure period more than 10 days.

Application.—Spread a layer of the treated plunging soil on a smooth hard surface, such as a floor or bench, and then place a row of plants, with the balls spaced at least 1 inch apart, on this soil. Fill the spaces between the plant balls with treated soil, taking care not to get the treated soil in contact with the stems of the plants, and cover the upper side of the plant balls with treated soil to within 2 inches of the stems. Then, place about 1 inch of treated soil against the row of plants. The operation is repeated until all the plants are plunged.

(5) METHYL BROMIDE FUMIGATION

Equipment.—A fumigation chamber, of approved design, equipped with vaporizing, air-circulating, and ventilating systems must be provided.

Application.—After the chamber is loaded, the methyl bromide must be vaporized within it. The air within the chamber must be kept in circulation during the period of fumigation. At the completion of the treatment, the chamber must be well ventilated before it is entered and the plants removed. The ventilating system should also be in continuous operation during the entire period of removal of the fumigated articles.

(i) Fumigation of plants, with or without soil

Temperature.—The temperature of the soil (with bare rootstock, the root spaces) and air must be at least 63° F. during the entire fumigation period.

Dosage.—Two and one-half pounds of methyl bromide per 1,000 cubic feet, including the space occupied by the load.

Period of treatment.—Two and one-half hours.

Preparation of plants.—The treatment is to be applied only to plants with bare roots or in 8-inch pots, or smaller, or in soil balls not larger than 8 inches in diameter or thicker than 8 inches when not spherical. The soil should not be puddled or saturated. With wet material, drying for a period of 12 hours is advisable before treatment. The plants should be stacked on racks or separated so that the gas can have access to both top and bottom surfaces of pots or soil balls. While not essential that the balls be completely separated from each other, they should not be jammed tightly together.

Varieties of plants.—The list of plants, including greenhouse, perennial, and nursery-stock types treated experimentally is subject to continual expansion and, moreover, is too great to include in these instructions. Such a list, including also those which have been injured by the treatment, will be supplied on request.

(ii) *Fumigation of strawberry plants in shipping crates of field-packed baskets*

Temperature.—The temperature of the plants and air must be at least 60° F. during the entire fumigation period.

Dosage.—Three pounds of methyl bromide per 1,000 cubic feet, including the space occupied by the load.

Period of treatment.—Four hours.

Preparation of plants.—Strawberry plants may be fumigated either bundled and packed in damp moss in slatted shipping crates or in field-packed baskets of 1 bushel or less. The load in the fumigation space should be arranged to allow the gas to enter from all sides of the containers.

Varieties of plants.—This treatment has been authorized for strawberry plants only.

(m) TREATMENT OF PLANTS BEFORE DIGGING

(1) CARBON DISULFIDE EMULSION

Equipment.—Strips or squares of 24-gage galvanized iron, 10 inches wide of the proper size, and watertight cans or tubs must be provided.

Season.—This treatment must not be used when adult beetles are present.

Temperature.—The treatment must not be applied when the temperature of the soil at a depth of 6 inches is below 40° F., or it is anticipated that the temperature will fall below this during the period of treatment.

Dosage.—The dosage of stock emulsion which must be used is dependent on the minimum soil temperature anticipated during the period of the treatment. Schedules 1, 2, and 3 in tables 2 and 3 give the dosages required for the treatment of plant balls of various sizes.

TABLE 2.—*Dosage for circular collars*

Diameter of ball to be dug (inches)	Diameter of collar	Water	Stock carbon disulfide emulsion			Diameter of ball to be dug (inches)	Diameter of collar	Water	Stock carbon disulfide emulsion		
			Sched-ule No. 1 40°-50° F.	Sched-ule No. 2 50°-60° F.	Sched-ule No. 3 60°-70° F.				Sched-ule No. 1 40°-50° F.	Sched-ule No. 2 50°-60° F.	Sched-ule No. 3 60°-70° F.
	Inches	Gallons	Cubic centi-meters	Cubic centi-meters	Cubic centi-meters		Inches	Gallons	Cubic centi-meters	Cubic centi-meters	Cubic centi-meters
12 or less....	15	4.5	31	23	20	24.....	36	17.5	119	99	80
14.....	21	6.0	41	34	27	25-27.....	39	21.0	143	119	95
18.....	27	10.0	68	57	45	28-30.....	42	24.0	164	136	105
20.....	30	12.0	82	68	54	33.....	45	27.5	187	156	125
22.....	33	15.0	102	85	68	36.....	48	31.5	215	179	143

TABLE 3.—*Dosage for square collars*

Diameter of ball to be dug (inches)	Length of side of collar	Water	Stock carbon disulfide emulsion			Diameter of ball to be dug (inches)	Length of side of collar	Water	Stock carbon disulfide emulsion		
			Sched- ule No. 1 40°-50° F.	Sched- ule No. 2 50°-60° F.	Sched- ule No. 3 60°-70° F.				Sched- ule No. 1 40°-50° F.	Sched- ule No. 2 50°-60° F.	Sched- ule No. 3 60°-70° F.
			Cubic centi- meters	Cubic centi- meters	Cubic centi- meters				Cubic centi- meters	Cubic centi- meters	Cubic centi- meters
12 or less.....	18	5.5	37	31	25	24.....	36	22.5	153	128	102
14.....	21	7.5	51	43	34	25-27.....	39	26.0	177	148	118
18.....	27	12.5	85	71	57	28-30.....	42	30.5	208	173	139
20.....	30	15.5	106	88	70	33.....	45	35.0	238	199	159
22.....	33	19.0	129	108	86	36.....	48	40.0	272	227	182

Period of treatment.—The soil must not be disturbed for 48 hours.

Period of digging.—The plants must be dug within 3 days after the completion of the treatment.

Varieties of plants.—The varieties which have been treated successfully by this method are given in Technical Bulletin 478.

Preparation of plants.—The surface of the soil about the base of the plant must be practically level; treatment must not be applied on a slope which cannot be leveled without filling. Weeds and debris must be removed from the surface of the soil. It is advisable to tie low-hanging branches so they will not dip into the treating solution. After the size of the ball to be lifted with the plant has been determined, a galvanized-iron collar of the proper size is placed about the base of the plant and forced to a depth of 3 inches into the soil. The soil must be firmed carefully on each side of the galvanized iron to prevent seepage.

Application.—The quantity of treating solution to be used must be determined from tables 2 and 3. The required quantity of stock emulsion is added to water and mixed well. Then the solution is poured into the collar, avoiding splashing or unnecessary disturbance of the soil. Pouring the solution on a spade will be of considerable help. A record must be made of the time required for the treating solution to disappear from the surface. Drainage conditions must be such that the solution does not disappear from the surface in less than 10 minutes or more than 5 hours. An examination must be made after the treatment has been applied to determine the uniformity of penetration.

Handling plants after treatment.—The inspector must be sure that a ball of soil no larger than that originally planned is removed with the plant.

(2) LEAD ARSENATE TREATMENT

Season.—Treatment must be applied by July 1. Plants may be certified when the period of treatment is completed, and until the following June 15.

Condition of soil.—The soil must be friable and in good tilth. This treatment is recommended only for soils that are slightly acid or neutral in reaction.

Dosage.—Thirty-five pounds to each 1,000 square feet, or 1,500 pounds per acre. For subsequent re-treatments, the quantity required to restore the original concentration, as determined by chemical analyses, must be applied.

Period of treatment.—Plants in plots treated initially must not be dug until October 1; those on re-treated plots may be dug on September 20.

Application.—Lead arsenate must be thoroughly mixed and incorporated with the upper 3 inches of soil. The ridge of soil between the plants in the rows and the soil about the base of the plants must be removed to a depth of 2 inches and placed in the space between the rows of plants. Lead arsenate may be applied with a suitable distributor, or broadcast by hand, before or after the hoeing operation is completed. Then the soil between the rows of plants must be cultivated three times. On the last cultivation, the cultivator is adjusted in such a manner that the treated soil is thrown toward the rows of plants. At least 3 inches of treated soil must be placed in the rows about the bases of the plants.

Varieties of plants.—The varieties of plants which have been treated successfully by this method are given in Bureau of Entomology and Plant Quarantine E-418.

Safety zone.—Same as that prescribed in (k).

Marking.—Same as that prescribed in (k).

TREATMENT OF FRUITS AND VEGETABLES

The effect of insecticidal treatments on fruits and vegetables varies with the variety and the condition. While guaranties cannot be given that no injury will be caused to the fruits and vegetables, the treatments are recommended only for those commodities which experience has shown were not seriously injured. It must be understood by the shipper that no liability shall attach either to the United States Department of Agriculture or to any of its employees in event of injury to the commodities.

After all treatments, the commodities must be handled in such a manner as to prevent reinfestation by the adult Japanese beetles.

(n) CARBON DISULFIDE FUMIGATION

Equipment.—A fumigation chamber, of approved design, equipped with a vaporizing, air-circulating, and ventilating system, must be provided.

Temperature.—The temperature must be at least 80° F. during the treatment.

Dosage.—Ten pounds to each 1,000 cubic feet in the chamber.

Period of treatment.—Two hours.

Varieties of fruit.—The varieties of fruit treated successfully by this method are given in Circular 373.

Preparation of fruit.—The crates and baskets of fruit must be stacked in the chamber in such a manner that the gas will have access to all sides of the containers.

Application.—After the chamber is loaded, the carbon disulfide must be vaporized within it. The water in the coils of the vaporizing pan must be at least 148° F. and should never exceed 180°. The water must be circulated through the coils of the vaporizing pan for 60 minutes after the fumigant has been put into the pan. The air within the chamber must be kept in circulation during the period of fumigation. At the completion of the treatment, the chamber must be well ventilated before it is entered and the fruit removed.

(o) CYANIDE FUMIGATION

Equipment.—Refrigerator cars in good condition and dry must be provided. Four screens, made of cotton netting on light wooden frames which fit tightly over the hatch openings, and equipped with three wires for fastening to the hatch cover, hinges, and graduating arm, must be provided for each car.

When liquid hydrocyanic acid is used, two metal trays having an area of 2 square feet and equipped to be suspended about 24 inches below the hatch cover, a 3-ounce measuring cup, and a tube for putting the material into the pans must be provided.

When HCN discoids are used, an approved type of can opener must be provided.

When calcium cyanide is used, two trays of light wooden construction, 6 to 8 feet long, 2 feet wide, and 2 inches deep, and sufficient building paper to properly cover these trays must be provided.

Temperature.—The temperature must be at least 75° F. in the car during the treatment.

<i>Dosage.</i> —Liquid hydrocyanic acid.....	6 ounces per car.
HCN discoids.....	6.5 ounces per car.
Calcium cyanide, 88 percent.....	3 pounds per car.
<i>Period of treatment.</i> —Liquid hydrocyanic acid.....	} 2 hours.
HCN discoids.....	
Calcium cyanide.....	
	1.5 hours.

Varieties of fruits and vegetables.—This treatment is authorized for bananas and empty refrigerator cars.

Preparation of commodities.—The bananas must be stacked in such a manner that the gas will have access to all sides.

Application, liquid hydrocyanic acid.—The doors must be closed tightly and the ice drips properly plugged. Remove one insulating plug from each bunker

and suspend a tray therein. Fill the 3-ounce measuring device with liquid hydrocyanic acid, and pour through the tube into the pan. Replace the plug and close the hatch cover tightly. Then repeat the operation in the ice bunker at the opposite end of the car.

HCN discoids.—The doors must be closed tightly and the ice drips properly plugged. Remove one insulating plug from each ice bunker. Open the can, remove one discoid unit and suspend it immediately in the bunker, holding the string at the edge of the opening and wedge it in position by closing and fastening the insulating plug. The open end of the can must be covered with the fiber cap immediately after the unit is removed to prevent loss of gas. Then place the second discoid unit in the bunker at the opposite end of the car.

Calcium cyanide.—The doors and the hatches must be tightly closed and the ice drips properly plugged. Open one door. Cover the trays with paper and apply 1½ pounds of calcium cyanide uniformly to the paper in each tray. Then place the trays on the lead near the door of the car. Finally, close the door tightly.

After the treatment is completed, open the hatches and place the screens in position and remove the plugs from the ice drips. Remove the pans and trays. Doors must be kept closed, unless an approved screen has been provided.

(p) ETHYLENE OXIDE FUMIGATION

Equipment.—A fumigation chamber, of approved design, equipped with vaporizing, air-circulating, and ventilating systems must be provided.

Temperature.—The temperature must be at least 75° F. during the treatment.

Dosage.—Two pounds for each 1,000 cubic feet in the chamber.

Period of treatment.—Two hours.

Varieties of fruit.—The varieties of fruit treated successfully by this method are given in Circular 373.

Preparation of fruit.—The crates and baskets of fruit must be stacked in the chamber in such a manner that the gas will have access to all sides of the containers.

Application.—After the chamber is loaded, the ethylene oxide must be vaporized in the pan in the chamber. The air within the chamber must be kept in circulation during the period of fumigation. At the completion of the treatment, the chamber must be well ventilated before it is entered and the fruits removed.

(q) METHYL BROMIDE FUMIGATION

(1) Refrigerator cars

Equipment.—Refrigerator cars must be in fair condition with sound, well-fitting doors and hatches. Standard cloth screens for covering the hatches and a temporary cloth screen for covering one door during ventilation are essential. An electric blower of not less than 750 cubic feet per minute capacity against ¼-inch water pressure, equipped with devices for lowering into the bunker and securing, so that the blower outlet butts against the bunker screen unimpeded either by studs or burglar bar.

Temperature.—The temperature within the car must be at least 70° F. during the treatment.

Dosage.—Two pounds for each 1,000 cubic feet; or 5 pounds per refrigerator car.

Period of treatment.—Two hours from the end of the fumigant release period.

Application.—The doors must be closed tightly and the ice drips properly plugged. The methyl bromide may be released either by weight or measure, through a copper or brass applicator tube of ¼-inch bore. This tube must be fitted with a disk-type spray nozzle and must be bent in a U-shape at the end, so that the spray nozzle is directed upward toward the center of the bunker and not less than 1 foot below the ceiling during the release of the fumigant. The blower must be in continuous operation during the release of the fumigant and for 5 minutes thereafter. At the end of this period the blower may be removed and transferred to the next car. The fumigant must be released in a split dosage consisting of 3 pounds in the bunker end through the hatch across from the blower and 2 pounds in the hatch at the opposite end of the car and in line with the blower.

Ventilation.—At the end of the exposure period, all hatches must be immediately propped open and screened, and the drip plugs removed. One door must be opened and screened for a period of 20 minutes, following which it should be closed and sealed. If the car is to be moved within one-half hour, the opening of the door may be omitted.

Commodities treated.—The treatment is approved for the following fruits and vegetables: Potatoes, sweetpotatoes, onions, tomatoes, snap beans, lima beans, sweet corn, cabbage, carrots, beets, apples, and peaches.

(2) *Fumigation house, room, and box*

The commodities listed above may be fumigated in approved fumigation chambers. The same requirements as to dosage, circulation period, exposure, temperature, and screening of doors listed under refrigerator-car fumigation apply. The chamber must be ventilated with the ventilating equipment in continuous operation for one-half hour. All ventilator intakes must be protected with eight-mesh wire screen. The ventilating fan must run during both the placing and removal of the load. In addition, the requirements for screened loading facilities and the subsequent certification of loads must be met. (Sec. 301.48a, issued under authority contained in sec. 301.48.)

S. A. ROHWER,
Acting Chief, Bureau of Entomology and Plant Quarantine.

JAPANESE BEETLE QUARANTINE REGULATIONS AMENDED

[Press notice]

JUNE 24, 1939.

An amendment to the Japanese beetle quarantine regulations, effective July 1, was announced by the Secretary of Agriculture today under which Rochester and Brighton, N. Y., are added as isolated, regulated areas, and all of Cuyahoga County, Ohio, is brought under regulation. This changes the status of Cleveland so that certification is required for all restricted commodities moved from that city to nonregulated territory.

Another change included in this amendment is the omission of regulated parts of Steuben County, N. Y., other than the town of Hornellsville, from the isolated areas. The exemption of certain types of sand and clay has been clarified and the requirements for certification of nursery and ornamental stock received by establishments within the regulated areas have been modified.

MODIFICATIONS OF JAPANESE BEETLE QUARANTINE REGULATIONS

INTRODUCTORY NOTE

The following amendment to the Japanese beetle quarantine regulations adds to the regulated area four townships in Cuyahoga County, Ohio, bringing the entire county within the area. This extension parallels action already taken by the Ohio Department of Agriculture to relieve a traffic situation encountered in the operation of vehicular inspection stations on westbound highways from the Cleveland area. With the extension of the continuous regulated area to include that city, certification is required for all restricted commodities moving from Cleveland to nonregulated territory. Rochester and Brighton, N. Y., are now included as outlying regulated areas subject to the same restrictions as apply to similar isolated points.

Another change included in this amendment is the omission of regulated portions of Steuben County, N. Y., other than the town of Hornellsville, from the isolated areas to which the movement of certain quarantined articles was heretofore required to be certified.

A section of regulation 7 exempting from the certification requirements certain types of sand and clay is reworded to clarify the requirement.

Requirements are modified for the certification of nursery and ornamental stock received by nurseries and greenhouses within the regulated area, both as to the infested and noninfested nurseries and greenhouses.

LEE A. STRONG,
Chief, Bureau of Entomology and Plant Quarantine.

AMENDMENT NO. 1 TO THE RULES AND REGULATIONS (SEVENTEENTH REVISION)
SUPPLEMENTAL TO NOTICE OF QUARANTINE NO. 48

(Approved June 22, 1939; effective July 1, 1939)

Under authority conferred by the Plant Quarantine Act of August 20, 1912 (37 Stat. 315), as amended by the act of Congress approved March 4, 1917 (39 Stat. 1134, 1165), it is ordered that regulations 3, 5, 6, 7, and 9 (secs. 301.48-3, 5, 6, 7, and 9) of the rules and regulations (seventeenth revision) supplemental to Notice of Quarantine No. 48 (sec. 301.48) on account of the Japanese beetle, which were promulgated February 16, 1939, are hereby amended to read as follows:

REGULATION 3

SEC. 301.48-3 *Regulated areas*.—In accordance with the provisos to Notice of Quarantine No. 48 (twelfth revision) (sec. 301.48), the Secretary of Agriculture designates as regulated areas for the purpose of these regulations the States, District, counties, townships, towns, cities, election districts, and magisterial districts listed below, including all cities, towns, boroughs, or other political subdivisions within their limits:

Connecticut.—The entire State.

Delaware.—The entire State.

District of Columbia.—The entire District.

Maine.—County of York; towns of Auburn and Lewiston, in *Androscoggin County*; towns of Cape Elizabeth, Gorham, Gray, New Gloucester, Raymond, Scarborough, Standish, and the cities of Portland, South Portland, Westbrook, and Windham, in *Cumberland County*; the City of Waterville, in *Kennebec County*; and the city of Brewer, in *Penobscot County*.

Maryland.—Counties of Cecil, Kent, Queen Annes, Somerset, and Worcester; the city of Baltimore; the city of Cumberland, the town of Frostburg, and election districts Nos. 4, 5, 6, 7, 11, 12, 14, 22, 23, 24, 26, 29, 31, and 32 in *Allegany County*; the city of Annapolis and election districts Nos. 2, 3, 4, and 5, in *Anne Arundel County*; election districts Nos. 1, 2, 3, 8, 9, 11, 12, 13, 14, and 15, in *Baltimore County*; all of *Caroline County* except election districts of American Corners (No. 8) and Hillsboro (No. 6); the city of Westminster, and the election districts of Freedom (No. 5), Hampstead (No. 8), New Windsor (No. 11), and Westminster (No. 7), in *Carroll County*; election districts of La Plata and White Plains, in *Charles County*; election districts of Cambridge (No. 7), East New Market (No. 2), Hurlock (No. 15), and Williamsburg (No. 12), in *Dorchester County*; election districts of Brunswick (No. 25), Buckeystown (No. 1), Frederick (No. 2), Jefferson (No. 14), New Market (No. 9), and Petersville (No. 12), in *Frederick County*; *County of Harford*, except election district of Marshall (No. 4); election districts of Elkridge (No. 1), Ellicott City (No. 2), Guilford (No. 6), and West Friendship (No. 3), in *Howard County*; election districts of Colesville (No. 5), and Rockville (No. 4), in *Montgomery County*, and those portions of the election districts of Bethesda (No. 7), and Wheaton (No. 13) in said county located within the established boundaries of the so-called Washington Suburban Sanitary District; all of *Prince Georges County* except the election districts of Aquasco (No. 8), and Nottingham (No. 4); towns of Easton and Oxford, in *Talbot County*; election districts of Hagerstown (Nos. 3, 17, 21, 22, 24, and 25), Halfway (No. 26), Leitersburg (No. 9), Sandy Hook (No. 11), Sharpsburg (No. 1), and Williamsport (No. 2), in *Washington County*; election districts of Camden (No. 13), Delmar (No. 11), Dennis (No. 6), Fruitland (No. 16), Nutters (No. 8), Parsons (No. 5), Pittsburg (No. 4), Salisbury (No. 9), and the town of Salisbury, Trappe (No. 7), and Willards (No. 14), in *Wicomico County*.

Massachusetts.—The entire State.

New Hampshire.—Counties of Belknap, Cheshire, Hillsboro, Merrimack, Rockingham, Strafford, and Sullivan; towns of Brookfield, Eaton, Effingham, Freedom, Madison, Moultonboro, Ossipee, Sandwich, Tamworth, Tuftonboro, Wakefield, and Wolfeboro, in *Carroll County*; towns of Alexandria, Ashland, Bridgewater, Bristol, Canaan, Dorchester, Enfield, Grafton, Groton, Hanover, Hebron, Holderness, Lebanon, Lyme, Orange, and Plymouth, in *Grafton County*.

New Jersey.—The entire State.

New York.—Counties of Albany, Bronx, Broome, Chemung, Chenango, Columbia, Cortland, Delaware, Dutchess, Fulton, Greene, Kings, Madison, Montgomery, Nassau, New York, Oneida, Onondaga, Orange, Otsego, Putnam, Queens,

Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Suffolk, Sullivan, Tioga, Ulster, Washington, and Westchester; towns of Red House and Salamanca, and the city of Salamanca, in *Cattaraugus County*; towns of Amherst, Cheektowaga, and Tonawanda, and the cities of Buffalo and Lackawanna, in *Erie County*; towns of Columbia, Danube, Fairfield, Frankfort, German Flats, Herkimer, Litchfield, Little Falls, Manheim, Newport, Salisbury, Schuyler, Stark, Warren, and Winfield, and the city of Little Falls, in *Herkimer County*; town of Watertown and city of Watertown, in *Jefferson County*; town of Mount Morris and village of Mount Morris, in *Livingston County*; city of Rochester and town of Brighton, in *Monroe County*; towns of Catherine, Cayuta, Dix, Hector, Montour, and Reading, and the borough of Watkins Glen, in *Schuyler County*; towns of Caton, Corning, Hornby, and Hornellsville, and the cities of Corning and Hornell, in *Steuben County*; towns of Caroline, Danby, Dryden, Enfield, Ithaca, Newfield, and the city of Ithaca, in *Tompkins County*; towns of Luzerne and Queensbury and the city of Glens Falls, in *Warren County*.

Ohio.—Counties of Carroll, Columbiana, Cuyahoga, Harrison, Jefferson, Mahoning, Portage, Stark, Summit, and Tuscarawas; the city of Coshocton, in *Coshocton County*; the city of Columbus, and villages of Bexley, Grandview, Grandview Heights, Hanford, Marble Cliff, and Upper Arlington, in *Franklin County*; the township of Newark and city of Newark, in *Licking County*; the city of Toledo, in *Lucas County*; the township of Madison and the city of Mansfield, in *Richland County*; townships of Bazetta, Braceville, Brookfield, Champion, Fowler, Hartford, Howland, Hubbard, Liberty, Lordstown, Newton, Southington, Warren, Weathersfield, and Vienna, the cities of Niles and Warren, and the villages of Cortland, Girard, Hubbard, McDonald, Newton Falls, and Orangeville, in *Trumbull County*.

Pennsylvania.—The entire State, except Crawford, Erie, Forest, and Venango Counties; Mercer Township in *Butler County*; Ashland, Beaver, Elk, Richland (including the boroughs of Foxburg and St. Petersburg), Salem, and Washington Townships, in *Clarion County*; townships of Coolspring, Deer Creek, Delaware, East Lackawannock, Fairview, Findley, French Creek, Greene, Hempfield, Jackson, Jefferson, Lackawannock, Lake, Liberty, Mill Creek, New Vernon, Otter Creek, Perry, Pine, Pymatuning, Salem, Sandy Creek, Sandy Lake, South Pymatuning, Springfield, Sugar Grove, West Salem, Wilmington, Wolf Creek, and Worth, and the boroughs of Clarksville, Fredonia, Greenville, Grove City, Jackson Center, Jamestown, Mercer, New Lebanon, Sandy Lake, Sheakleyville, and Stoneboro, in *Mercer County*; and the townships of Brokenstraw, Cherry Grove, Columbus, Conewango, Deerfield, Eldred, Farmington, Freehold, Limestone, Pine Grove, Pittsfield, Pleasant, Southwest, Spring Creek, Sugar Grove, Triumph, Watson (including the boroughs of Bear Lake, Grand Valley, Sugar Grove, Tidioute, and Youngsville), in *Warren County*.

Rhode Island.—The entire State.

Vermont.—Counties of Bennington, Rutland, Windham, and Windsor; and the town of Burlington, in *Chittenden County*.

Virginia.—Counties of Accomac, Arlington, Culpeper, Elizabeth City, Fairfax, Fauquier, Henrico, Loudoun, Norfolk, Northampton, Prince William, Princess Anne, and Stafford; magisterial districts of Dale and Manchester, in *Chesterfield County*; magisterial district of Sleepy Hole, in *Nansemond County*; magisterial district of Courtland, in *Spotsylvania County*; Camp Stuart, in *Warwick County*; magisterial district of Washington, in *Westmoreland County*; and the cities of Alexandria, Fredericksburg, Hampton, Newport News, Norfolk, Portsmouth, Richmond, South Norfolk, and Suffolk.

West Virginia.—Counties of Hancock, Harrison, Marion, Monongalia, and Taylor; districts of Arden, Hedgesville, Falling Waters, and Opequon, and the city of Martinsburg, in *Berkeley County*; the towns of Bolivar and Harpers Ferry, in *Jefferson County*; town of Keyser and district of Frankfort, in *Mineral County*; the city of Wheeling, in *Ohio County*; and the city of Parkersburg, in *Wood County*.¹

REGULATION 5

SEC. 301.48-5. *Restrictions on the movement of fruits and vegetables*.—A. *Control of movement*.—(1) Unless a certificate or permit shall have been issued therefor, by an inspector, except as provided in paragraphs (a) to (e), in-

¹ Secs. 301.48-3, 5, 6, 7, and 9 issued under authority of sec. 8, 37 Stat. 318; 39 Stat. 1165; 44 Stat. 250; 7 U. S. C. 161.

clusive, of this regulation: (i) No green corn on the cob, beans in the pod, bananas, apples, peaches, blackberries, blueberries, huckleberries, or raspberries shall be moved or allowed to be moved interstate from any regulated area to or through any point outside thereof; and (ii) no fruits and vegetables of any kind shall be moved or allowed to be moved interstate via refrigerator car or motortruck from the State, District, counties, election districts, townships, towns, or cities listed below to or through any point outside of the regulated areas:

Delaware.—The entire State.

District of Columbia.—The entire District.

Maryland.—Counties of Cecil, Kent, Queen Annes, Somerset, and Worcester; the city of Baltimore; election districts No. 12 and No. 15, in *Baltimore County*; all of *Caroline County*, except election district of American Corners (No. 8) and Hillsboro (No. 6); election districts of Cambridge (No. 7), East New Market (No. 2), Hurlock (No. 15), and Williamsburg (No. 12), in *Dorchester County*; election districts of Abingdon (No. 1), Halls Cross Roads (No. 2), and Havre de Grace (No. 6), in *Harford County*; election districts of Camden (No. 13), Delmar (No. 11), Dennis (No. 6), Fruitland (No. 16), Nutters (No. 8), Parsons (No. 5), Pittsburg (No. 4), Salisbury (No. 9), and the town of Salisbury, Trappe (No. 7), and Willard (No. 14), in *Wicomico County*.

New Jersey.—Counties of Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Hunterdon, Mercer, Middlesex, Monmouth, Ocean, Salem, Somerset, and Union.

Pennsylvania.—Counties of Bucks, Chester, Delaware, Lancaster, Montgomery, and Philadelphia; townships of Alsace, Amity, Brecknock, Caernarvon, Colebrookdale, Cumru, District, Douglass, Earl, Exeter, Hereford, Lower Alsace, Muhlenberg, Oley, Pike, Robeson, South Heidelberg, Spring, Union, and Washington, the city of Reading, and the boroughs of Bally, Bechtelsville, Birdsboro, Boyertown, Mohnton, Mount Penn, Saint Lawrence, Shillington, Sinking Spring, Temple, West Lawn, West Reading, Wyomissing, and Wyomissing Hills, in *Berks County*; townships of Londonderry, Lower Paxton, Lower Swatara, Susquehanna, and Swatara, the city of Harrisburg, and the boroughs of Highspire, Middletown, Paxtang, Penbrook, Royalton, and Steelton, in *Dauphin County*; townships of Lower Milford, Upper Milford, and Upper Saucon, and the boroughs of Coopersburg and Emaus, in *Lehigh County*; townships of Lower Saucon and Williams, in *Northampton County*.

Virginia.—Counties of Accomac, Arlington, and Northampton.

Provided, That the Chief of the Bureau of Entomology and Plant Quarantine may by administrative instructions extend or reduce the areas specified in this regulation when in his judgment such action is considered advisable.

(a) No restrictions are placed on the interstate movement of fruits and vegetables between October 16 and June 14, inclusive.

(b) No certificate or permit will be required for the interstate movement of fruits and vegetables when transported by a common carrier on a through bill of lading either from an area not under regulation through a regulated area to another nonregulated area, or from a regulated area through a nonregulated area to another regulated area, except that a certificate is required for interstate movement from the main regulated area to Brewer and Waterville, Maine; Brighton, Buffalo, Hornell, Mount Morris, Rochester, and Watertown, and the town of Hornellsville, Steuben County, N. Y., or to other regulated parts of Erie, Jefferson, and Livingston Counties, N. Y.; Columbus, Coshocton, Mansfield, Newark, and Toledo, Ohio, or to other regulated parts of Licking and Richland Counties, Ohio; Burlington, Vt.; and Parkersburg and Wheeling, W. Va. No restrictions are placed on the interstate movement of fruits and vegetables from Brewer and Waterville, Maine; Brighton, Buffalo, Hornell, Mount Morris, Rochester, and Watertown, and the town of Hornellsville, Steuben County, N. Y., or from other regulated parts of Erie, Jefferson, and Livingston Counties, N. Y.; Columbus, Coshocton, Mansfield, Newark, and Toledo, Ohio, or from other regulated parts of Licking and Richland Counties, Ohio; Burlington, Vt.; and Parkersburg and Wheeling, W. Va.

(c) No restrictions are placed on the interstate movement of fruits and vegetables when they shall have been manufactured or processed in such a manner that in the judgment of the inspector no infestation could be transmitted.

(d) No restrictions are placed on the interstate movement of any shipments of (1) apples or peaches of less than 15 pounds to the shipment; (2) bananas in single bunches packed in commercial containers; or (3) bananas singly, or in individual hands.

(e) No restrictions are placed on the interstate movement of commercially packed apples or commercially packed peaches in any quantity, except those moving via refrigerator cars or motortrucks from the area listed in paragraph (1) of this regulation.

(2) No restrictions are placed on the interstate shipment from the regulated areas of fruits and vegetables other than those mentioned above except that any such interstate shipments of fruits and vegetables may be inspected at any time or place inside or outside the regulated areas and when actually found to involve danger of dissemination of Japanese beetle to uninfested localities, measures to eliminate infestation may be required as a condition of further transportation or delivery.

B. Conditions of certification.—Certificates may be issued for the interstate movement of fruits and vegetables to points outside the regulated areas between June 15 and October 15, inclusive, under one of the following conditions:

(3) When the fruits and vegetables, moving from a point in the regulated area other than that specified in paragraph (1) of this regulation, or moving from such designated area other than by refrigerator car, have actually been inspected by the United States Department of Agriculture and found free from infestation. The number of inspection points for such certification will be limited and their location determined by shipping needs and further conditioned on the establishment at such points of provisions satisfactory to the inspector for the handling and safeguarding of such shipments during inspection. Such inspection may be discontinued and certification withheld by the inspector during periods of general or unusual flight of the beetles.

(4) When the fruits and vegetables have been handled or treated under the observation of an inspector in manner and by method to free them from any infestation.

(5) When the fruits and vegetables have originated outside of the regulated areas and are to be reshipped directly from freight yards, transfer points, or unloading docks within such areas, under provisions satisfactory to the inspector for safeguarding of such shipments pending certification and reshipment. Certificates on this basis will be issued without inspection only in cases where, in the judgment of the inspector, the shipments concerned have not been exposed to infestation while within such freight yards, transfer points, or unloading docks.

(6) When the fruits and vegetables were grown in districts where the fact has been established to the satisfaction of the inspector that no infestation exists and are to be shipped directly from the farms where grown to points outside the regulated areas, or are shipped from infested districts where the fact has been established to the satisfaction of the inspector that the Japanese beetle has not begun or has ceased its flight.

(7) When the fruits and vegetables moving via refrigerator car from the area listed in paragraph (1) of this regulation, have been inspected and loaded in a manner to prevent infestation, in a refrigerator car with closed or adequately screened doors and hatches, which car prior to loading has been determined by an inspector as fumigated or thoroughly swept and cleaned by the common carrier in a manner to rid it of infestation. During the interval between fumigation or cleaning and loading such refrigerator car must be tightly closed and sealed.

(8) When the fruits and vegetables moving via refrigerator car from the area listed in this regulation have been fumigated in the car, when deemed necessary in the judgment of the inspector, and when the doors and hatches of the car have been tightly closed or adequately screened under the supervision of an inspector.²

REGULATION 6

SEC. 301.48-6. *Restrictions on the movement of nursery and ornamental stock.*—A. *Control of movement.*—Nursery and ornamental stock as defined in regulation 1 (sec. 301.48-1) shall not be moved or allowed to be moved interstate from the regulated areas to or through any point outside thereof, unless a certificate or permit shall have been issued therefor by the inspector, except as follows:

(1) The following articles, because of their growth or production, or their manufactured or processed condition, are considered innocuous as carriers of infestation and are therefore exempt from the requirements of certification:

² See footnote 1, p. 70.

(a) (i) True bulbs, corms, and tubers, when dormant, except for storage growth, and when free from soil, and (ii) single dahlia tubers or small dahlia root divisions when free from stems, cavities, and soil. Dahlia tubers, other than single tubers or small root divisions meeting these conditions, require certification.

(b) (i) Cut orchids, (ii) orchid plants, when growing exclusively in *Osmunda* fiber, (iii) *Osmunda* fiber, osmundine, or orchid peat (*Osmunda cinnamomea*, and *O. claytoniana*).

(c) (i) Floral designs or "set pieces," including wreaths, sprays, casket covers, and all formal florists' designs; bouquets and cut flowers not so prepared are not exempted; (ii) trailing arbutus, or Mayflower (*Epigaea repens*), when free from soil or primary roots, and when shipped during the period between October 16 and June 14, inclusive.

(d) (i) Herbarium specimens, when dried, pressed, and treated, and when so labeled on the outside of each container of such materials, (ii) balsam pillows, when composed of balsam needles only, (iii) mushroom spawn, in brick, flake, or pure culture form, (iv) banana stalks, when crushed, dried, and shredded.

(e) (i) Sheet moss (*Calliergon schriberi* and *Thuridium recognitum*), (ii) resurrection plant or birds'-nest moss (*Selaginella lepidophylla*), (iii) sphagnum moss, bog moss, or peat moss (*Sphagnaceae*), (iv) dyed moss, when heat treated and appropriately labeled.

(2) No restrictions are placed on the interstate movement of nursery and ornamental stock imported from foreign countries when reshipped from the port of entry in the unopened original container and labeled as to each container with a copy certificate of the country from which it was exported, a statement of the general nature and quantity of the contents, the name and address of the consignee, and the country and locality where grown.

(3) No restrictions are placed on the interstate movement between October 16 and June 14, inclusive, of cut flowers, soil-free aquatic plants, and of portions of plants without roots and free from soil (such as branches, twigs and scions of trees and shrubs, and Christmas trees).

(4) No certificate or permit will be required for the interstate movement of nursery and ornamental stock when transported by a common carrier on a through bill of lading either from an area not under regulation through a regulated area, or from a regulated area through a nonregulated area to another regulated area, except that a certificate is required between June 15 and October 15 for interstate movement of cut flowers, aquatic plants, and of portions of plants without roots and free from soil (such as branches, twigs, and scions of trees and shrubs, and Christmas trees) from the main regulated areas to Brewer and Waterville, Maine; Brighton, Buffalo, Hornell, Mount Morris, Rochester, and Watertown, and the town of Hornellsville, Steuben County, N. Y., or to other regulated parts of Erie, Jefferson, and Livingston Counties, N. Y.; Columbus, Coshocton, Mansfield, Newark, and Toledo, Ohio, or to other regulated parts of Licking and Richland Counties, Ohio; Burlington, Vt.; and Parkersburg and Wheeling, W. Va. No restrictions are placed on the interstate movement between June 15 and October 15 of cut flowers, aquatic plants, and of portions of plants without roots and free from soil (such as branches, twigs, and scions of trees and shrubs, and Christmas trees) from Brewer and Waterville, Maine; Brighton, Buffalo, Hornell, Mount Morris, Rochester, and Watertown, and the town of Hornellsville, Steuben County, N. Y., or from other regulated parts of Erie, Jefferson, and Livingston Counties, N. Y.; Columbus, Coshocton, Mansfield, Newark, and Toledo, Ohio, or from other regulated parts of Licking and Richland Counties, Ohio; Burlington, Vt.; and Parkersburg and Wheeling, W. Va.

B. Conditions governing the issuance of certificates and permits.—For the purpose of certification of nursery and ornamental stock, nurseries, greenhouses, and other premises concerned in the movement of such stock will be classified as follows:

(5) *Class I.*—Nurseries, greenhouses, and other premises concerned in the movement of nursery and ornamental stock on or within approximately 500 feet of which no infestation has been found may be classified as class I. Upon compliance with the requirements of paragraph (11) of this regulation, nursery and ornamental stock may be certified by the inspector for shipment from such premises without further inspection, and without meeting the safeguards prescribed as a condition of interstate shipment of plants originating in nurseries or greenhouses of class III.

(6) *Class III.*—(a) Nurseries, greenhouses, and other premises concerned in the movement of nursery and ornamental stock on which either grubs in the soil or one or more beetles have been found, will be classified as class III, provided, (i) there are maintained on the premises subdivided class I areas, certified houses, frames, or plots, or other certified areas, or (ii) there is a legitimate need for interstate or intradealer certification of such stock. Such classification will not be granted to nurseries, greenhouses, and other premises that do not maintain certified or subdivided areas and require only infrequent certification. Such classification also may be given to nurseries, etc., where one or more beetles or grubs are found in the immediate proximity (within approximately 500 feet) of such nurseries, etc., on adjacent property or properties. In the case of nursery properties under single ownership and management but represented by parcels of land widely separated, such parcels may be independently classified either as class I or class III upon compliance with such conditions and safeguards as shall be required by the inspector. Similarly, unit nursery properties, which would otherwise fall in class III, may be open to subdivision, for the purpose of rating such subdivisions in classes I or III, when in the judgment of the inspector such action is warranted by recent and scanty infestation limited to a portion of the nursery concerned: *Provided*, That the subdivision containing the infestation shall be clearly marked by boundaries of a permanent nature which shall be approximately 500 feet beyond the point where the infestation occurs.

(b) Upon compliance with paragraphs (7), (10), and (11) of this regulation, nursery and ornamental stock may be certified by the inspector for shipment from such premises under any one of the following conditions: (i) That the roots shall be treated by means approved by the Bureau of Entomology and Plant Quarantine in manner and by method satisfactory to the inspector; or (ii) in the case of plants in which the root system is such that a thorough inspection may be made, that the soil shall be entirely removed from the stock by shaking or washing; or (iii) that it shall be shown by evidence satisfactory to the inspector that the plants concerned were produced in a certified greenhouse.

(7) Greenhouses of class III may be certified upon compliance with all the following conditions with respect to the greenhouses themselves and to all potting beds, heeling-in areas, hotbeds, coldframes, and similar plots:

(a) Ventilators, doors, and all other openings in greenhouses or coldframes on premises in class III shall be kept screened in manner satisfactory to the inspector during the period of flight of the beetle, namely, south of the northern boundaries of Maryland and Delaware between June 1 and October 1, inclusive, or north thereof between June 15 and October 15, inclusive.

(b) Prior to introduction into nurseries or greenhouses, sand, if contaminated with vegetable matter, soil, earth, peat, compost, or manure taken from infested locations or which may have been exposed to infestation, must be sterilized or fumigated under the direction and supervision of, and in manner and by method satisfactory to the inspector. If such sand, soil, earth, peat, compost, or manure is not to be immediately used in such greenhouses, it must be protected from possible infestation in manner and by method satisfactory to the inspector.

(c) All potted plants placed in certified greenhouses of class III and all potted plants to be certified for interstate movement therefrom (i) shall be potted in certified soil; (ii) shall, if grown outdoors south of the northern boundaries of Maryland and Delaware at any time between June 1 and October 1, inclusive, or north thereof at any time between June 15 and October 15, inclusive, be kept in screened frames while outdoors; (iii) shall, if grown outdoors during any part of the year, be placed in beds in which the soil or other material shall have been treated in manner and by method approved by the Bureau of Entomology and Plant Quarantine to eliminate infestation; and (iv) shall comply with such other safeguards as may be required by the inspector.

(8) Cut flowers and other parts of plants without roots or soil may be certified for movement either (a) when they have been inspected by an inspector and found free from infestation, or (b) when they have been grown in a greenhouse of class I or in a certified greenhouse of class III and are transported under such safeguards as will in the judgment of the inspector prevent infestation. (See also par. (3) of this regulation.)

(9) Nursery and ornamental stock originating on or moved from unclassified premises may be certified by the inspector under either one of the following conditions: (a) That the soil shall be entirely removed from the stock, or (b)

that the roots shall be treated by means approved by the Bureau of Entomology and Plant Quarantine in manner and by method satisfactory to the inspector, or (c) that it shall be shown by evidence satisfactory to the inspector that the accompanying soil was obtained at such points and under such conditions that in his judgment no infestation could exist therein.

(10) Nurserymen, florists, dealers, and others, in order to maintain a class III status shall report immediately on forms provided for that purpose all their sales or shipments of nursery and ornamental stock, sand, if contaminated with vegetable matter, soil, earth, peat, compost, and manure both to points outside the regulated areas and to other classified nurseries or greenhouses within the regulated area. Certification may be denied to any person who has omitted to make the report required by this regulation, and such denial of certification shall continue until the information so omitted has been supplied.

(11) Nurserymen, florists, dealers, and others, in order to maintain a class I status, or to maintain, in a class III establishment, a class I subdivision, a certified plot, or a certified greenhouse, (a) shall restrict their purchases or receipts of nursery and ornamental stock, sand, if contaminated with vegetable matter, soil, earth, peat, compost, and manure secured within the regulated area and intended for use on class I or certified premises, to articles which have been certified under these regulations as to each such article and the said certificate shall accompany the article when moved; (b) shall obtain approval of the inspector before such articles are received on class I or certified premises or are taken into certified greenhouses; (c) shall report immediately in writing all purchases or receipts of such articles secured from within the regulated area for use on such premises; and (d) shall also report immediately on forms provided for that purpose all their sales or shipments of such articles both to points outside the regulated areas and to other classified nurseries or greenhouses within the regulated areas. Certification may be denied to any person who has omitted to make the report or reports required by this regulation, and such denial of certification shall continue until the information so omitted has been supplied.

(12) Nursery and ornamental stock imported from foreign countries and not reshipped from the port of entry in the unopened original container may be certified for movement under these regulations when such stock has been inspected by an inspector and found free from infestation.

(13) Nursery and ornamental stock originating outside the regulated areas and certified stock originating in classified nurseries or greenhouses may be certified for reshipment from premises other than those on which they originated, under provisions satisfactory to the inspector for the safeguarding of such stock from infestation at the point of reshipment and en route, and when found advisable by the inspector, after reinspection and determination of freedom from infestation.³

REGULATION 7

SEC. 301.48-7. *Restrictions on the movement of sand, soil, earth, peat, compost, and manure.*—A. *Control of movement.*—Sand, soil, earth, peat, compost, and manure shall not be moved or allowed to be moved interstate from any point in the regulated areas to or through any point outside thereof unless a certificate or permit shall have been issued therefor by the inspector, except as follows:

(1) No restrictions are placed on the interstate movement of (a) sand and clay when free from vegetable matter; (b) greensand marl; and (c) such other sands and clays as have been treated or processed and subsequently handled in such manner that in the judgment of the inspector no Japanese beetle could exist therein, provided that each container of such article shall be labeled on the outside thereof as to nature of contents, except that in the case of bulk shipments such label shall accompany the waybill or other shipping papers.

(2) No restrictions are placed on the interstate movement of manure, peat, compost, or humus (a) when dehydrated and either shredded, ground, pulverized, or compressed, or (b) when treated with crude petroleum or any other product having high potency as an insecticide, and when so labeled on the outside of each commercial container of such materials.

³ See footnote 1, p. 70.

(3) No restrictions are placed on the interstate movement of sand, soil, earth, peat, compost, and manure imported from foreign countries when reshipped from the port of entry in the unopened original container and labeled as to each container with the country of origin, and when the shipment is further protected in manner or method satisfactory to the inspector.

(4) No certificate will be required for the interstate movement of sand, soil, earth, peat, compost, and manure when transported by a common carrier on a through bill of lading either from an area not under regulation through a regulated area, or from a regulated area through a nonregulated area to another regulated area.

B. Conditions of certification.—Certificates for the movement of restricted sand, soil, earth, peat, compost, and manure may be issued under any one of the following conditions:

(5) When the articles to be moved have originated in districts included in the regulated area, but in which neither beetles nor grubs in soil have been found.

(6) When the material consists of fresh manure or of mined, dredged, or other similar materials, and it has been determined by an inspector that no infestation could exist therein.

(7) When the material has been removed, under the supervision of an inspector, from a depth of more than 12 inches below the surface of the ground and either (a) is to be moved between October 16 and June 14, inclusive, or (b) is loaded and shipped at points where it has been determined by an inspector that no general infestation of adult beetles exists, or (c) when the cars and loading operations are protected by screening under the direction of and in manner and by method satisfactory to the inspector.

(8) When the material has been fumigated with carbon disulphide or otherwise treated under the supervision of and in manner and by method satisfactory to the inspector. Such fumigation or treatment will be required as a condition of certification of all restricted sand, soil, earth, peat, compost, and manure, except such as is loaded and shipped in compliance with paragraphs (5), (6), or (7) hereof.⁴

REGULATION 9

SEC. 301.4S-9. *Marking and certification a condition of interstate transportation.*—(a) Every box, basket, or other container of restricted articles listed in regulations 5, 6, and 7 (secs. 301.4S-5, 6, and 7) shall be plainly marked with the name and address of the consignor and the name and address of the consignee, and shall have securely attached to the outside thereof a valid certificate or permit issued in compliance with these regulations. In the case of lot shipments by freight, one certificate attached to one of the containers and another certificate attached to the waybill will be sufficient.

(b) In the case of bulk carload shipments by rail, the certificate shall accompany the waybill, conductor's manifest, memorandum, or bill of lading pertaining to such shipment, and in addition each car shall have securely attached to the outside thereof a placard showing the number of the certificate or certificates accompanying the waybill.

(c) In the case of shipment by road vehicle, the certificates shall accompany the vehicle.

(d) Certificates shall be surrendered to the consignee upon delivery of the shipment.⁴

This amendment shall be effective on and after July 1, 1939.

Done at the city of Washington this 22d day of June 1939.

Witness my hand and the seal of the United States Department of Agriculture.

[SEAL]

H. A. WALLACE,
Secretary of Agriculture.

[Copies of foregoing amendment were sent to all common carriers doing business in or through the area regulated on account of the Japanese beetle.]

⁴ See footnote 1, p. 70.

NOTICE TO GENERAL PUBLIC THROUGH NEWSPAPERS

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE,
Washington, D. C., June 22, 1939.

Notice is hereby given that the Secretary of Agriculture, under authority conferred on him by the Plant Quarantine Act of August 20, 1912 (37 Stat. 315), as amended, has promulgated Amendment No. 1 to the revised rules and regulations supplemental to the Japanese beetle quarantine (Notice of Quarantine No. 48), effective on and after July 1, 1939. The purpose of the amendment is principally to include in the regulated area the entire county of Cuyahoga, Ohio, changing the status of Cleveland so that certification is required for all restricted commodities moved from that city to nonregulated area; to add Rochester, N. Y., and Brighton, N. Y., as outlying regulated areas; to omit part of the area in Steuben County, N. Y.; and to include minor modifications as to certification requirements. Copies of the amendment may be obtained from the Bureau of Entomology and Plant Quarantine, United States Department of Agriculture, Washington, D. C.

H. A. WALLACE,
Secretary of Agriculture.

[The above notice was published in the following newspapers: The Times, Hartford, Conn., July 1, 1939; the Journal-Every Evening, Wilmington, Del., July 1, 1939; the Press-Herald, Portland, Maine, July 5, 1939; the Sun, Baltimore, Md., July 3, 1939; the Post, Boston, Mass., July 3, 1939; the Union, Manchester, N. H., July 7, 1939; the News, Newark, N. J., July 3, 1939; the Times, New York, N. Y., July 3, 1939; the Press, Cleveland, Ohio, July 3, 1939; the Bulletin, Philadelphia, Pa., July 1, 1939; the Bulletin, Providence, R. I., July 1, 1939; the Free Press, Burlington, Vt., July 3, 1939; the News Leader, Richmond, Va., July 1, 1939; the Gazette, Charleston, W. Va., July 5, 1939; and the Star, Washington, D. C., July 3, 1939.]

**ANNOUNCEMENTS RELATING TO MEXICAN FRUITFLY QUARANTINE
(NO. 64)**

**TEXAS GRAPEFRUIT HARVEST EXTENDED THROUGH MAY 15; GRAPEFRUIT MUST BE
STERILIZED AFTER APRIL 11**

[Press notice]

APRIL 10, 1939.

The season for harvesting grapefruit under the Mexican fruitfly quarantine regulations, which apply to the Texas counties of Brooks, Cameron, Hidalgo, and Willacy and part of Jim Wells County, has been extended to the close of May 15, Lee A. Strong, Chief of the Bureau of Entomology and Plant Quarantine, announced today. The harvesting season normally closes under the quarantine on April 30.

In order to insure against spread of infestation all grapefruit harvested in the regulated area after April 11, 1939, must be sterilized in manner and by method approved by the Chief of the Bureau of Entomology and Plant Quarantine.

The extension of the harvest season for grapefruit and the requirement of sterilization for such fruit harvested after April 11, 1939, was announced after consultation with the Texas State Department of Agriculture and is concurred in by J. E. McDonald, commissioner of agriculture.

The harvesting season for Valencia oranges closes on June 15, 1939, as provided in circular B. E. P. Q. 487, dated January 27, 1939.

B. E. P. Q. 495.

ADMINISTRATIVE INSTRUCTIONS RELATING TO THE MEXICAN FRUITFLY QUARANTINE, REQUIRING STERILIZATION OF ALL GRAPEFRUIT HARVESTED ON AND AFTER APRIL 12, 1939, AND EXTENDING THE HARVESTING SEASON ON GRAPEFRUIT TO THE CLOSE OF MAY 15, 1939

APRIL 7, 1939.

Under authorization vested in the Chief of the Bureau of Entomology and Plant Quarantine in the third proviso of Notice of Quarantine No. 64, revised (sec. 301.64), it is hereby required, as provided in paragraph (c) of regulation

6 thereto (sec. 301.64-6), that all grapefruit harvested on and after April 12, 1939, in the area regulated under said quarantine, shall be sterilized under approved methods as a condition of issuance of permits for movement of such fruit from the regulated area.

Section A, regulation 7 (sec. 301.64-7) of said quarantine is also hereby modified to extend the harvesting season for grapefruit to the close of May 15, 1939. The host-free period for grapefruit, under this modification, will begin May 16 and continue to August 31, 1939, inclusive. (B. E. P. Q. 487, dated January 27, 1939, extends the harvesting season for Valencia oranges to June 15, 1939.)

Sterilization of grapefruit has been found necessary to insure against dissemination of Mexican fruitflies, due to the occurrence of such flies in the regulated area. The extension of the harvesting season, it has been determined, may be safely made without increasing the risk of spread of the Mexican fruitflies since sterilization will render grapefruit safe for movement from the regulated area. (Sec. 301.64b, issued under authority contained in sec. 301.64.)

LEE A. STRONG,

Chief, Bureau of Entomology and Plant Quarantine.

ANNOUNCEMENTS RELATING TO WHITE-FRINGED BEETLE QUARANTINE (NO. 72)

B. E. P. Q. 496.

SUGGESTIONS FOR CONSTRUCTION OF PLUNGING AND GROWING BEDS AND THEIR MAINTENANCE UNDER BEETLE-FREE CONDITIONS IN ACCORDANCE WITH REGU- LATIONS OF THE WHITE-FRINGED BEETLE QUARANTINE

APRIL 23, 1939.

Nursery stock with soil attached is eligible for certification for movement from areas under quarantine on account of the white-fringed beetle provided it has been grown and maintained under beetle-free conditions, as specified in paragraph (b) of regulation 5 of Quarantine No. 72.

The following types of units are suggested as means of providing for beetle-free conditions and if properly maintained should be effective in preventing natural infestation by the white-fringed beetle.

RAISED PLUNGING BEDS

Beds or benches, indoors or outside, which are at least 12, preferably 18 inches, above the ground, and which are protected from infestation in manner and by method satisfactory to an authorized inspector. Structures * * * are to be protected against infestation by approved oil or other barriers.

SURFACE PLUNGING OR GROWING BEDS

A heeling-in area or growing grounds enclosed within walls extending far enough underground to prevent larvae from passing under. This may require a wall as much as 24 inches in depth. The walls should be of sufficient height above ground to permit the construction of oil or other barriers on a level 12, preferably 18, inches above the ground. The soil or other material contained or used therein should be treated in approved manner under the supervision and direction of an authorized inspector. Such articles not immediately placed in the units should be adequately protected from infestation.

During the active adult beetle season, barriers constructed in connection with plunging and growing beds should be properly maintained, and adequate sanitary and protective measures should be taken by establishments concerned to fully protect the approved units from infestation. Vegetation should be kept down and calcium arsenate dust or other specified treatment applied to the satisfaction of an authorized inspector.

BARRIERS

It will be necessary to protect the beds during the season of adult activity by approved barrier.

Whenever practicable, the oil barrier is recommended. The heavy construction enables it to withstand jars or jolts which would greatly decrease the efficiency of the all-metal barrier.

Barriers should at all times be maintained in a manner that will assure their efficiency.

AVERY S. HOYT,
Acting Chief, Bureau of Entomology and Plant Quarantine.

B. E. P. Q. 485, Revised.

ADMINISTRATIVE INSTRUCTIONS—REMOVAL OF WHITE-FRINGED BEETLE CERTIFICATION REQUIREMENTS UNTIL JULY 1, 1939, FOR SPECIFIED ARTICLES CONSIGNED FROM DESIGNATED PORTIONS OF THE REGULATED AREAS

(Approved May 6, 1939; effective May 8, 1939)

Circular B. E. P. Q. 485, issued effective January 15, 1939, waived certification requirements until July 1, 1939, for specified articles consigned from certain parts of the areas regulated under quarantine No. 72. The present revision adds additional areas in Louisiana from which certification of the same articles is waived from May 8 until July 1, 1939.

Under authorization provided in notice of Quarantine No. 72 (sec. 301.72), all certification requirements are hereby waived during the regulated periods from May 8 to June 30, 1939, inclusive, of the following articles enumerated in regulation 3 (a) and (b), (sec. 301.72-3) when free from soil and when consigned from any of the regulated areas in the county of Mobile, Ala.; county of Escambia, Fla.; parishes of East Baton Rouge, Jefferson, Orleans (including the city of New Orleans), and Plaquemines, La.; and counties of Hinds, Jackson, and Pearl River, Miss., it having been determined that sanitary measures and natural conditions have sufficiently reduced the risk of egg or adult contamination as to render certification unnecessary during the period indicated:

Potatoes and sweetpotatoes; sweetpotato vines, draws, and cuttings; cordwood, pulpwood, stump wood, and logs; used or unused lumber, timbers, posts, poles, cross ties, and other building materials; hay, roughage of all kinds, straw, leaves, and leafmold; peas, beans, and peanuts in shells, or the shells of any of these products; seed cotton, cottonseed, baled cotton lint, and linters; used implements and machinery, scrap metal, junk, and utensils or containers coming in contact with the ground; brick, tiling, stone, and concrete slabs and blocks; nursery stock and other plants, which are free from soil.

The restrictions on the interstate movement from any of the regulated areas, of the following articles designated in paragraph (a) (1) of Regulation 3 of Quarantine No. 72 (sec. 301.72-3), as carriers of larvae remain in effect throughout the year:

Soil, earth, sand, clay, peat, compost, and manure whether moved independent of, or in connection with or attached to nursery stock, plants, products, articles, or things. (Sec. 301.72a, issued under authority contained in sec. 301.72.)

LEE A. STRONG,
Chief, Bureau of Entomology and Plant Quarantine.

[The foregoing circular was sent to all common carriers doing business in or through the areas regulated on account of the white-fringed beetle.]

INSTRUCTIONS TO POSTMASTERS

POST OFFICE DEPARTMENT,
THIRD ASSISTANT POSTMASTER GENERAL,
Washington, May 16, 1939.

Postmaster:

MY DEAR SIR: Your attention is invited to the inclosed administrative instructions issued by the Bureau of Entomology and Plant Quarantine, United States Department of Agriculture, in connection with Federal Quarantine Order No. 72 on account of the white-fringed beetle.

Under these instructions no certificate of inspection will be required during the period from May 8 to July 1, 1939, in connection with the acceptance for mailing of the articles named therein when free from soil and when shipped from any of the regulated areas in the county of Mobile, Ala., county of Escambia, Fla., parishes of East Baton Rouge, Jefferson, Orleans (including the city of New Orleans), and Plaquemines, La., and counties of Hinds, Jackson, and Pearl River, Miss.

Postmasters will please take note and be governed accordingly. See paragraph 1, section 595, Postal Laws and Regulations.

Very truly yours,

RAMSEY S. BLACK,
Third Assistant Postmaster General.

TERMINAL INSPECTION OF PLANTS AND PLANT PRODUCTS

POST OFFICE DEPARTMENT,
THIRD ASSISTANT POSTMASTER GENERAL,
Washington, June 19, 1939.

Terminal inspection is required of plants and plant products addressed to Arizona, Arkansas, California, District of Columbia, Florida, Hawaii, Idaho, Louisiana, Mississippi, Montana, Oklahoma, Oregon, Puerto Rico, Utah, and Washington. All parcels addressed to the States named must be plainly marked on the outside to show the exact nature of their contents.

Section 596, Postal Laws and Regulations, prescribes three methods of handling such parcels, as follows:

1. As provided in paragraphs 3, 4, 5, and 6 of section 596, the parcels shall, upon payment of postage therefor, be forwarded by the postmaster at the post office of their destination to the proper State official at the nearest place where plant inspection is maintained, where, after inspection and passing and the payment of return postage therefor, they shall be returned to the post office of address and delivered to the addressee.

2. Or, as provided in paragraph 7, section 596, if the addressee so desires, he may have the parcels addressed to himself in care of a State plant inspector arranging with the inspector to forward the parcels, after inspection and passing, to the addressee upon payment of the forwarding postage therefor which shall be furnished to the inspector by the addressee.

3. Or, as also provided in paragraph 7, section 596, the addressee may have the sender place a pledge to pay the forwarding postage on the parcels, addressed in care of a plant inspector, in which case they shall, after inspection and passing, be forwarded rated with the forwarding postage, such postage to be collected from the addressee upon delivery of the parcels.

In addition to the above-described methods of handling, arrangements have also been made whereby the shipper may at his own instance address the parcels to the addressee in care of a State plant inspector at an established terminal inspection point. When so addressed at the instance of the mailer he shall place on the parcels immediately below the return address his pledge guaranteeing payment of forwarding postage, such postage to be collected upon delivery to the addressee as provided by paragraph 4, section 769. Parcels so sent shall be labeled as follows:

"Shipped for (or on a/c)

W. H. JONES,
Garfield, Utah.

From:

John Doe Nurseries,
Shenandoah, Iowa.

Forwarding Postage Guaranteed.

Contents:

To:

W. H. Jones,
c/o State Plant Inspector,
Salt Lake City, Utah."

When forwarding parcels under the latter arrangement, the inspector shall first cross out "c/o State Plant Inspector." and the name of the post office at the point of inspection appearing in the original address, and insert the name of the post office to which the parcels are to be forwarded. After endorsing the parcels to show that the contents have been inspected and passed, the inspector will return them to the postmaster who will rate the same with the necessary forwarding postage and dispatch them to the office of ultimate address, the additional postage to be collected from the addressee upon delivery to him.

It is essential in following this arrangement that the shippers have their parcels directed to the State inspector at an inspection point located to the best advantage with respect to the post office of final address, thus facilitating onward dispatch and delivery.

Following is a list of the States and Territories operating under the terminal plant inspection laws, the plants and plant products which when sent to these States or Territories are subject to inspection and the names of places located in each where inspection is maintained.

ARIZONA

Plants and plant products subject to inspection.—All florists' stock, trees, shrubs, vines, cuttings, grafts, scions, buds, fruit pits, and other seeds of fruit and ornamental trees or shrubs, and other plants and plant products for propagation, except vegetable and flower seeds.

Terminal inspection places:

Benson.	Kingman.	Prescott.	Tucson.
Globe.	Parker.	Safford.	Yuma.
Holbrook.	Phoenix.	Solomonsville.	

(At the following places inspection may be had upon call only.)

Bisbee.	Duncan.	Nogales.	Williams.
Casa Grande.	Flagstaff.	Springerville.	Winslow.
Chandler.	Glendale.	Tempe.	
Douglas.	Mesa.	San Simon.	

ARKANSAS

Plants and plant products subject to inspection.—Sweetpotatoes, sweetpotato plants, vines, draws, and slips.

NOTE.—Under a State quarantine on account of the sweetpotato weevil the articles named are prohibited entry into Arkansas unless accompanied with an inspection certificate issued by the State of origin showing the plants and plant products to be free of infestation. Parcels accompanied with such certificate will be delivered to the addressees without inspection. Parcels not accompanied with such certificate shall be returned without additional postage to the office of mailing endorsed "Unmailable—Not accompanied with required certificate."

CALIFORNIA

Plants and plant products subject to inspection.—All florists' stock, trees, shrubs, vines, cuttings, grafts, scions, buds, fruit pits, and other seeds of fruit and ornamental trees or shrubs, and other plants and plant products in the raw or unmanufactured state, except vegetable and flower seeds.

Terminal inspection places:

Ager.	Camarillo.	Elsinore.	Hueneme.
Alameda.	Centerville.	Escalon.	Hughson.
Alhambra.	Charter Oak.	Escondido.	Huntington Beach.
Alturas.	Clatsworth.	Etiwanda.	Huntington Park.
Alvarado.	Chico.	Eureka.	Hynes.
Anaheim.	Chino.	Exeter.	Imperial.
Anderson.	Chowchilla.	Fairfield.	Indio.
Arbuckle.	Claremont.	Fairmead.	Inglewood.
Arcadia.	Clearwater.	Farmersville.	Irvington.
Arlington.	Coachella.	Fillmore.	Irwindale.
Aromas.	Colfax.	Fontana.	Ivanhoe.
Artesia.	Colma.	Fort Bragg.	Jamestown.
Atascadero.	Colton.	Fowler.	Kelseyville.
Auburn.	Colusa.	Fresno.	King City.
Azusa.	Compton.	Fullerton.	Kingsburg.
Bakersfield.	Concord.	Gardena.	La Habra.
Banning.	Corning.	Gazelle.	Lakeport.
Bard.	Corona.	Gilroy.	Lancaster.
Beaumont.	Cottonwood.	Glendale.	La Verne.
Bell.	Covina.	Glendora.	Le Grand.
Bellflower.	Cucamonga.	Goshen.	Lemon Cove.
Belmont.	Culver City.	Gridley.	Lincoln.
Berkeley.	Cutler.	Gustine.	Lindsay.
Beverly Hills.	Davis.	Half Moon Bay.	Livermore.
Bieber.	Death Valley.	Hanford.	Livingston.
Biggs.	Delano.	Harbor City.	Lodi.
Bloomington.	Del Rosa.	Hayward.	Lomita.
Blythe.	Dinuba.	Healdsburg.	Lompoc.
Brawley.	Downey.	Hemet.	Long Beach.
Brea.	Duarte.	Hermosa Beach.	Loomis.
Bryn Mawr.	Ducor.	Highland.	Los Angeles.
Burbank.	Earlimart.	Hilmar.	Los Banos.
Burlingame.	East Highlands.	Hollister.	Los Molinos.
Calxico.	El Cajon.	Hollywood.	Lower Lake.
Caliente.	El Centro.	Holtville.	Madera.
Calipatria.	El Monte.	Hornbrook.	Manteca.
Calistoga.	El Segundo.		Martinez.

Marysville.	Palms.	San Fernando.	Sultana.
McFarland.	Paradise.	San Francisco.	Sunol.
Menlo Park.	Pasadena.	San Gabriel.	Susanville.
Merced.	Paso Robles.	Sanger.	Tehachapi.
Millbrae.	Patterson.	San Gregorio.	Terre Bella.
Mill Valley.	Penryn.	San Jose.	Tipton.
Mission San Jose.	Perris.	San Juan Capistrano.	Topanga.
Modesto.	Pescadero.	San Leandro.	Torrance.
Monrovia.	Piru.	San Lorenzo.	Tracy.
Montalvo.	Pixley.	San Luis Obispo.	Tulare.
Montebello.	Placerville.	San Mateo.	Turlock.
Monterey.	Pleasanton.	San Pedro.	Ukiah.
Moorpark.	Pomona.	San Rafael.	Upland.
Mount Eden.	Porterville.	Santa Ana.	Upper Lake.
Napa.	Puente.	Santa Barbara.	Vacaville.
National City.	Red Bluff.	Santa Cruz.	Vallejo.
Nevada City.	Redding.	Santa Fe Springs.	Van Nuys.
Newark.	Redlands.	Santa Maria.	Venice.
Newhall.	Redondo Beach.	Santa Monica.	Ventura.
Newman.	Redwood City.	Santa Paula.	Visalia.
Niles.	Reedley.	Santa Rosa.	Walnut.
North Pomona.	Rialto.	Santa Susana.	Wasco.
Norwalk.	Richgrove.	Saticoy.	Waterford.
Oakdale.	Ripon.	Saugus.	Watsonville.
Oakland.	Rivera.	Sausalito.	Watts.
Ocean Park.	Riverside.	Selma.	Whittier.
Oceanside.	Roseville.	Shafter.	Williams.
Ojai.	Sacramento.	Sierra Madre.	Willowbrook.
Ontario.	Saint Helena.	Simi.	Willows.
Orange.	Salinas.	Somis.	Winters.
Orland.	San Andreas.	Sonora.	Woodlake.
Orosi.	San Benito.	South Pasadena.	Woodland.
Oroville.	San Bernardino.	Spadra.	Yettam.
Oxnard.	San Bruno.	Springville.	Yreka.
Pacoima.	San Diego.	Stockton.	Yuba City.
Palmdale.	San Dimas.	Strathmore.	Yucaipa.

DISTRICT OF COLUMBIA

Plants and plant products subject to inspection.—All florists' stock, trees, shrubs, vines, cuttings, grafts, scions, buds, fruit pits, and other seeds of fruit and ornamental trees or shrubs, and other plants and plant products in the raw or unmanufactured state, except vegetable and flower seeds.

Inspection place: Washington, D. C.

FLORIDA

Plants and plant products subject to inspection.—Trees, shrubs, and vines (except soft-bodied) or any part thereof.

NOTE.—Shrubs and vines of a woody nature such as rose bushes, hibiscus, grape vines, blackberry vines, etc., are subject to inspection. Bedding plants (such as coleus and pansy), vegetable plants (such as cabbage and sweetpotato), and strawberry plants, are not subject to inspection.

Terminal inspection places:

Gainesville. Jacksonville. Miami. Pensacola. Tampa.
West Palm Beach.

HAWAII

Plants and plant products subject to inspection.—All florists' stock, trees, shrubs, vines, cuttings, grafts, scions, buds, fruit pits, and other seeds of fruit and ornamental trees and shrubs and other plants and plant products in the raw or unmanufactured state except vegetable and flower seeds.

Inspection place: Honolulu.

IDAHO

Plants and plant products subject to inspection.—All florists' stock, trees, shrubs, vines, cuttings, grafts, scions, buds, fruit pits, and other seeds of fruit and ornamental trees or shrubs, and other plants and plant products in the raw or unmanufactured state, except vegetable and flower seeds and succulent plants such as tomato, pepper, and cabbage: *Provided*, That this list of plants and plant products shall not apply to plants and plant products shipped either under the certificate of the Bureau of Entomology and Plant Quarantine of the United States Department of Agriculture or of the Idaho State Department of Agriculture.

Terminal inspection places:

Blackfoot.	Emmett.	New Plymouth.	Saint Anthony.
*Loise.	*Idaho Falls.	*Parma.	Sandpoint.
Bonniers Ferry.	Jerome.	*Payette.	*Twin Falls.
Burley.	*Lewiston.	*Pocatello.	Weiser.
Caldwell.	Moscow.	Rathdrum.	
*Coeur d'Alene.	*Nampa.	Rupert.	

NOTE.—Asterisks (*) show places to which parcels shall be sent when addressed at the instance of the mailer in care of a plant inspector for onward transmission to the ultimate addressees.

LOUISIANA

Plants and plant products subject to inspection.—Corn on the cob, ears of corn, cornstalks, and other parts or debris of corn and broomcorn plants, and sorghums and Sudan grass; cut flowers or entire plants of chrysanthemum, aster, dahlia, and gladiolus, except gladiolus corms and dahlia tubers without stems; lima beans in the pod, green shell beans in the pod (including varieties variously known as cranberry or horticultural shell beans but not including string or wax beans), beets with tops, and rhubarb.

Inspection place: New Orleans.

MISSISSIPPI

Plants and plant products subject to inspection.—Sweetpotatoes, sweetpotato plants, vines, and cuttings; morning-glory vines and roots: *Provided*, That this list of plants and plant products shall not apply to any of the above plants, roots, or tubers, the shipments of which originate within the State of Mississippi and are addressed to places within that State, when accompanied with a certificate of inspection issued by the State plant board of Mississippi.

Terminal inspection places:

Aberdeen.	Gulfport.	Moss Point.	Starkville.
Brookhaven.	Jackson.	Ocean Springs.	State College.
Durant.	Laurel.	Poplarville.	
Grenada.	Meridian.	Senatobia.	

MONTANA

Plants and plant products subject to inspection.—All florists' stock, trees, shrubs, vines, cuttings, grafts, scions, buds, fruit pits and other seeds of fruit and ornamental trees or shrubs, and other plants and plant products in the raw or unmanufactured state, except vegetable and flower seeds and succulent plants such as tomato, pepper, and cabbage.

Terminal inspection places:

Billings.	Glasgow.	Havre.	Laurel.
Butte.	Glendive.	Helena.	Miles City.
Culbertson.	Great Falls.	Kalispell.	Missoula.

OKLAHOMA

Plants and plant products subject to inspection.—All field-grown florists' stock, trees, shrubs, vines, cuttings, grafts, scions, buds, fruit pits, and other seeds of fruit and ornamental trees and shrubs and other plant products in the raw or unmanufactured state including cottonseed, sweetpotatoes, sweetpotato plants, and sweetpotato vine cuttings: *Provided*, That this list of plants and plant products shall not apply to—

(1) Vegetable and flower seeds, and such succulent plants as tomatoes, egg-plants, pepper, cabbage, etc.

(2) Shipments of plants and plant products originating in Oklahoma and addressed to places in that State, or when the Oklahoma permit, the Oklahoma dealers' certificate, or the Oklahoma inspection certificate is attached to the shipment.

Inspection place: Oklahoma City.

OREGON

Plants and plant products subject to inspection.—All florists' stocks, trees, shrubs, vines, cuttings, grafts, scions, buds, fruit pits, and other seeds of fruit and ornamental trees or shrubs, and other plants and plant products in the raw or unmanufactured state, except vegetable and flower seeds.

Terminal inspection places:

Albany.	Grants Pass.	McMinnville.	Roseburg.
Astoria.	Gresham.	Medford.	Salem.
Baker.	Heppner.	Milton.	The Dalles.
Coquille.	Hillsboro.	Ontario.	Tillamook.
Corvallis.	Hood River.	Oregon City.	Toledo.
Cottage Grove.	Klamath Falls.	Pendleton.	Warren.
Dallas.	La Grande.	Portland.	
Gold Beach.	Lakeview.	Redmond.	

PUERTO RICO

Plants and plant products subject to inspection.—All florists' stock, trees, shrubs, vines, cuttings, grafts, scions, buds, fruit pits, and other seeds of fruit and ornamental trees or shrubs, and other plants and plant products in the raw or unmanufactured state, including field, vegetable, and flower seeds; also cotton lint.

Inspection place: San Juan.

UTAH

Plants and plant products subject to inspection.—All florists' stock, trees, shrubs, vines, cuttings, grafts, scions, buds, fruit pits, and other seeds of fruit and ornamental trees or shrubs, and other plants and plant products in the raw or unmanufactured state, including field, vegetable, and flower seeds;

Terminal inspection places:

Brigham City.	Logan.	Price	*Richfield.
*Cedar City.	*Ogden.	*Provo.	*Salt Lake City.
Farmington.			

NOTE.—Asterisks (*) show places to which parcels shall be sent when addressed at the instance of the mailer in care of a plant inspector for onward transmission to the ultimate addresses.

WASHINGTON

Plants and plant products subject to inspection.—All florists' stock, trees, shrubs, vines, cuttings, grafts, scions, buds, fruit pits, and other seeds of fruit and ornamental trees or shrubs, and other plants and plant products in the raw or unmanufactured state, except vegetable and flower seeds.

Terminal inspection places:

Bellingham.	Olympia.	Sumner.	Walla Walla.
Benton City.	Prosser.	Tacoma.	Wenatchee.
Chehalis.	Seattle.	Toppenish.	White Salmon.
Everett.	Spokane.	Vancouver.	Yakima.
Mount Vernon.			

Pursuant to the act of June 4, 1936, and Order No. 9620 of October 15, 1936, amending section 596, Postal Laws and Regulations, the following States have also established quarantines prohibiting or regulating the entry into these States of certain plants and plant material, known to be hosts of insects or plant diseases:

State:	Dates of notices relating thereto
Arkansas-----	May 6, 1938; May 31, 1938 (p. 43, June 1938 Supplement to Postal Guide).
California-----	Apr. 6, 1937 (p. 23, May 1937 Supplement).
Florida-----	Nov. 7, 1938 (p. 21, November 1938 Supplement).
Mississippi-----	Apr. 7, 1937 (p. 26, May 1937 Supplement).
Montana-----	Apr. 8, 1937 (p. 26, May 1937 Supplement).
Oregon-----	June 23, 1937; Mar. 2, 1938; Aug. 1, 1938; Jan. 9, 1939; Feb. 13, 1939 (p. 44, August 1937 Supplement and subsequent issues)

Postmasters are cautioned to exercise care in the acceptance of parcels containing plants and plant material in order to prevent the improper dissemination of any plant pest injurious to agriculture. In addition to terminal plant inspection and State quarantines referred to in this notice, attention is also invited to the nursery stock certificate requirement and to the various Federal plant quarantines issued by the United States Department of Agriculture referred to in section 595, Postal Laws and Regulations, and listed on pages 18, 19, and 20 of the July 1937 Postal Guide, Part I.

RAMSEY S. BLACK,
Third Assistant Postmaster General.

MISCELLANEOUS ITEMS

B. E. P. Q. 406, Revised, Supplement No. 2.

PLANT-QUARANTINE IMPORT RESTRICTIONS, BRITISH COLONY OF MALTA

MAY 9, 1939.

POTATOES MAY BE IMPORTED FROM ALEXANDRIA, EGYPT

Government Notice No. 236 of August 27, 1934, has been amended by Government Notice No. 126 of March 25, 1939, to exclude the port of Alexandria, Egypt, from the operation of the provisions of the said Notice No. 236 (item 2, p. 2, B. E. P. Q. 406, rev.). Consequently, potatoes may now be imported into Malta from the port of Alexandria, Egypt.

The words "except from the port of Alexandria, Egypt," should, therefore, be inserted in line 1, item 2, page 2, B. E. P. Q. 406, revised, after the word "Africa."

LEE A. STRONG,

Chief, Bureau of Entomology and Plant Quarantine.

B. E. P. Q. 408, Supplement No. 1.

PLANT-QUARANTINE IMPORT RESTRICTIONS, EIRE (IRISH FREE STATE)

MAY 12, 1939.

CHRYSANTHEMUM MIDGE ORDER AMENDED

IMPORTATION OF CHRYSANTHEMUM PLANTS PROHIBITED

The Destructive Insects and Pests (Chrysanthemum Midge) Order of March 8, 1939, prescribed that it shall not be lawful to import into Eire any chrysanthemum plants except from Northern Ireland or under and in accordance with a license issued by the Minister for Agriculture.

Hitherto the importation of rooted and unrooted chrysanthemum cuttings was prohibited. The present order prohibits the importation of chrysanthemum "plants." For a definition of plants see page 2 of B. E. P. Q. 408.

The same order prescribes that a statement shall be added to the required inspection certificate (see p. 5 of B. E. P. Q. 408) that the shipment concerned does not contain any chrysanthemum plants.

DECLARATION IN CERTIFICATE THAT SHIPMENT CONTAINS NEITHER ELM TREES NOR CHRYSANTHEMUM PLANTS

In a letter dated March 24, 1939, from the Department of External Affairs, Dublin, Eire, we are reminded not only that a statement should be added to the required inspection certificate to the effect that the corresponding shipment or mail package contains no chrysanthemum plants but also that it contains no elm trees. The endorsement "No chrysanthemum plants or elm trees" will meet the requirements.

LEE A. STRONG,

Chief, Bureau of Entomology and Plant Quarantine.

B. E. P. Q. 420, Supplement No. 2.

PLANT-QUARANTINE IMPORT RESTRICTIONS, REPUBLIC OF FINLAND

JUNE 26, 1939.

PRECAUTIONS AGAINST FOOT-AND-MOUTH DISEASE

Although Decree No. 381, of December 9, 1938, does not pertain to plant quarantines, it is believed desirable to indicate its provisions as a matter of information.

As a precaution against the introduction of foot-and-mouth disease into Finland, the importation of forage or fodder into that country is prohibited until further notice; this applies also to sacks and other packing materials. Exemption from this prohibition may be granted by the Ministry of Agriculture under prescribed conditions.

LEE A. STRONG,

Chief, Bureau of Entomology and Plant Quarantine.

B. E. P. Q. 422, Supplement No. 4.

PLANT-QUARANTINE IMPORT RESTRICTIONS, KINGDOM OF RUMANIA

JUNE 22, 1939.

INSECT PESTS AND PLANT DISEASES DECLARED INJURIOUS

(Publication No. 5, Rumanian Plant Protection Service, March 1938)

As prescribed by article 14 of the general regulations of October 4, 1934 (B. E. P. Q. 422, p. 6) the following insect pests and plant diseases are declared injurious to Rumanian crops and plant protective measures have been taken against them in accordance with the provisions of article 76 of the law on the organization and encouragement of agriculture of March 1937, and the report of the Ministerial Council, No. 785, of March 3, 1938:

Insect pests:

- Aonidiella pernicioso* Berl.=*Aspidiotus perniciosus* Comst., San Jose scale.
Aulacaspis pentagona (Targ.) Newst., white peach scale.
Ceratitis capitata (Wied.), Mediterranean fruitfly.
Conotrachelus nenuphar (Hbst.), plum curculio.
(Cydia) Grapholitha molesta (Busck), oriental fruit moth.
Dreyfusia nüsslini Ritz=*Adelges nüsslini* (Böener), a gall louse.
Dreyfusia piceae Ritz=*Adelges piceae* (Ratz.), a gall louse.
Epitrix cucumeris (Harr.), potato flea beetle.
Leptinotarsa decemlineata (Say), Colorado potato beetle.
(Platyedra) Pectinophora gossypiella (Saund.), pink bollworm.

Plant diseases:

- Acanthostigma parasiticum* (Hart.) Sacc., a needle disease of conifers.
Ascochyta piniperda Lind., a disease of spruce, etc.
Bacillus amylovorus, (Burr.) Trev., fire blight.=*Ercinia amylovora* (Burr.) Com. S. A. B.
Bacillus baccarini Machiatti, associated with "mal nero" of the grapevine.
Bacterium holci Kendr., bacterial spot of *Holcus*.
Bacterium hyacinthi Wakk., yellow disease.
Bacterium (Pseudomonas) malvacearum E. F. Sm., angular leaf spot of cotton.
Bacterium mori Boy. and Lam.
Bacterium (Pseudomonas) tumefaciens E. F. Sm. and Towns.
Bacterium vesicatorium Doidge, bacterial spot of tomato.
Cenangium populeum (Pers.) Rehm., a canker disease of poplar, et al.
Cerastostomella ulmi (Schw.) Buis. Dutch elm disease.
Cronartium ribicola Fisch., white pine blister rust.
Dasycephala willkommii Hartig, European larch canker.
Dibotryon morbosum (Schw.) Thiess. and Syd.=*Ploucrighia morbosus* (Schw.) Sacc., black knot of plum and cherry.
Etsiniae ampelina (deBy.) Shear=*Gloeosporium ampelinum* (deBy.) Sacc., anthracnose of grape.
Endothia parasitica (Murr.) And. and And., chestnut blight.
Gnomonia erythrostoma (Pers.) Auers., a cherry disease.
Gnomonia veneta (Sacc. Speg.) Kleb., anthracnose of sycamore.
Guignardia bidwellii (Ell.) Viala and Ravaz, black rot.
Gymnosporangium sabinae (Dick.) Wint., a rust of *Pyrus* and *Juniperus*.
Heterodera schachtii Schmidt, sugar beet nematode.
Leptosphaeria herpotrichoides de Not., a foot rot of wheat, et al.
Lophodermium pinastri (Schr.) Chev., needle cast of pine.
McLanconis perniciosus Br. and Fa., and its imperfect stage *Coryneum perniciosum* Br. and Fa. were associated with "irk disease" of chestnut, but the disease is now known to be caused by *Phytophthora cambivora* (Petr.) Buis.
Melampsora populina (Pers.) Léy., a rust of poplars.
Neocosmospora vasinfectum (Atk.) Smith=*Fusarium vasinfectum* Atk.
Neopeckia coulteri (Peck.) Sacc., take-all.
Oplidiaster radidis (Willd.) Pasch., a root disease of flax, *Brassica* spp., etc.
Ophiobolus graminis Sacc., take-all.
Ophiobolus herpotrichus (Fries) Sacc., a foot-rot (disease) of wheat.
Peridermium pini (Willd.) Kleb., a rust of pine trunks and branches.
Rhabdocline pseudotsugae Syd., needle cast.
Rossellinia necatrix (Hart.) Berl., a root rot of the grapevine.
Sclerotinia bulborum (Wakk.) Rehm., onion and hyacinth sclerotinia.
Sclerotium tuliparum Kleb.=*Rhizoctonia tuliparum* (Kleb.) Whetzel and Arthur, gray bulb rot.
Synchytrium endobioticum (Schilb.) Pers., potato wart.
Urophlyctis alfaiae (Lagh.) Magn., crown wart.
Urophlyctis leproides (Trab.) Magn., a root-gall disease of beet.

Virus diseases:

- Crinkling of leaves of *Soja*.
 Mosaic of leaves of *Soja*.
 Streak disease of tomato.

LEE A. STRONG,
 Chief, Bureau of Entomology and Plant Quarantine.

B. E. P. Q. 434, Revised, Supplement No. 1.

PLANT-QUARANTINE IMPORT RESTRICTIONS, COLONY OF ST. LUCIA, BRITISH WEST INDIES

JUNE 22, 1939.

IMPORTATION OF BANANA PLANTS PROHIBITED

Proclamation No. 13 of April 29, 1939, prohibits the importation into that colony, until further notice, of any banana plants or any parts thereof proceeding either directly or indirectly from any place beyond the limits of the Colony of St. Lucia.

Provided that this prohibition shall not apply to any such plants or parts thereof which are imported under license given by the Governor and subject to the provisions thereof.

Accordingly, the last two items on page 1 of Circular B. E. P. Q. 434, Revised, should be deleted and replaced by the following item:

Banana plants or parts thereof (*Musa* spp.): Importation prohibited from any source, except under license issued by the Governor and under the provisions thereof. (Proclamation No. 13 of April 29, 1939.)

LEE A. STRONG,
Chief, Bureau of Entomology and Plant Quarantine.

B. E. P. Q. 449, Supplement No. 3.

PLANT-QUARANTINE IMPORT RESTRICTIONS, PERSIA (IRAN)

MAY 22, 1939.

DISINFECTION CERTIFICATE REQUIRED FOR FLOWER BULBS AND ORNAMENTALS

Note Verbale No. 58755/4544 of March 18, 1939, from the Division of Economics, Ministry of Foreign Affairs, Teheran, Persia, to the American legation, states that flower bulbs recently imported from certain countries, although provided with phytosanitary certificates, have been infested with pests, such as nematodes (*Anguillulidae*) and mites (*Acarida*).

Hereafter, flower bulbs and ornamental plants must be accompanied by a disinfection certificate for entry into Persia. Otherwise an entry permit will not be granted.

LEE A. STRONG,
Chief, Bureau of Entomology and Plant Quarantine.

B. E. P. Q. 471, Supplement No. 1.

PLANT-QUARANTINE IMPORT RESTRICTIONS, UNION OF SOUTH AFRICA

MAY 4, 1939.

RESTRICTIONS ON THE IMPORTATION OF HAY AND STRAW AS PACKING FOR MERCHANDISE

Although the following regulations, published in the Government Gazette of the Union of South Africa of March 3, 1939, represent precautions against the introduction of foot-and-mouth disease and other diseases of livestock, they are presented as a matter of information, since hay and straw as packing materials are involved.

ARTICLE 1. The regulations published under Government Notice No. 331 of March 16, 1934, are hereby repealed.

ART. 2. No person shall introduce into the Union any hay or straw used for the packing of merchandise unless—

- (a) It is kept in a bond store at the port of entry for a period of 4 months reckoned from the date of shipment to the Union; or

- (b) It is accompanied by a certificate, signed by an official authorized thereto by the Government of the country of origin, stating that the hay or straw—
- (1) Has been kept in store free from contact with any animal likely to be affected with the foot-and-mouth disease, contagious bovine pleuropneumonia, sheep pox, or rinderpest for a period of 4 months immediately prior to its use; or
 - (2) Has been subjected to the action of live steam in a closed compartment at a temperature of 185° F. for at least 10 minutes; or
 - (3) Has been placed loosely in a closed compartment having a temperature of not less than 65° F. and thoroughly sprayed with 10 fluid ounces formaldehyde solution (containing not less than 37 percent formaldehyde by weight) for each 1,000 cubic feet of space in the compartment, the compartment being immediately closed in such a manner as to prevent the escape of the formaldehyde vapor and kept closed for a period of not less than 8 hours; or
 - (4) Placed loosely in a closed compartment and subjected to the action of heat in the presence of moisture at a temperature of not less than 260° F. for a period of not less than 2 hours, the said temperature being maintained during that period throughout the whole of the compartment.

ART. 3. No person shall introduce into the Union any fodder, hay, straw, maize stalks, or kaffir-corn stalks unless it is accompanied by a certificate, signed by an official authorized thereto by the Government of the country of origin, stating—

- (a) That the product was derived from a district which was free from foot-and-mouth disease, contagious bovine pleuropneumonia, sheep pox, and rinderpest for a period of at least 12 months prior to shipment to the Union; or
- (b) That the product was kept in store free from contact with any animal likely to be affected with foot-and-mouth disease, contagious bovine pleuropneumonia, sheep pox, or rinderpest for a period of 4 months immediately prior to shipment to the Union.

ART. 4. These regulations shall take effect as from May 1, 1939.

AVERY S. HOYT,

Acting Chief, Bureau of Entomology and Plant Quarantine.

B. E. P. Q. 476, Supplement No. 3.

PLANT-QUARANTINE IMPORT RESTRICTIONS, COMMONWEALTH OF AUSTRALIA

MAY 9, 1939.

AMENDMENT OF REGULATION 21 OF THE REGULATIONS EFFECTIVE SEPTEMBER 19, 1935

RESTRICTIONS ON THE IMPORTATION OF VEGETABLES

Regulation 21 of the Quarantine (Plants) Regulations is amended by adding at the end thereof the following subregulation:

- E. (1) In the case of vegetables from any country, a certificate dated and signed by a responsible officer of the Department of Agriculture of the country of origin identifying the vegetables, stating the quantity, and certifying:
- (a) That they were grown in the country named;
 - (b) That the pest known as cabbage butterfly (*Pieris rapae* L.) does not exist in the part of the country in which they were grown;
 - (c) That they were, on inspection prior to shipment, found to be free from *Pieris rapae* L.; and
 - (d) That they were packed in the country of origin in clean new packages.

- (2) For the purpose of this subregulation "vegetable" means borecole, broccoli, brussels sprouts, cabbage, cauliflower, chou moellier, horseradish, kohlrabi, radish, rape, Swedes, turnip, or any vegetable whatsoever of the family Cruciferae, and includes lettuce.

Since *Pieris rapae* is quite generally distributed throughout the United States the provisions of (1) (b) cannot be certified, consequently this subregulation constitutes a prohibition of importation of the vegetables above named from the United States.

LEE A. STRONG,
Chief, Bureau of Entomology and Plant Quarantine.

B. E. P. Q. 497.

PLANT-QUARANTINE IMPORT RESTRICTIONS, VENEZUELA

MAY 12, 1939.

Pending the enactment of a new plant quarantine law now before the Venezuelan Congress, the provisions of an official notice published in the *Gazeta Oficial*, No. 17264, of November 5, 1930, will remain effective. That notice reads as follows in translation:

PHYTOSANITARY CERTIFICATE OF ORIGIN REQUIRED

Fruits, seeds, plants, and parts of plants may not be introduced into Venezuela if they are not accompanied by a phytosanitary certificate indicating origin, in which it is affirmed that they are found to be free from any disease or pest dangerous to agriculture.

The certificate must be issued by competent authorities of the country of origin and be visaed by the Venezuelan consul.

SPECIAL PERMIT IN ADVANCE FOR PLANTS IN SOIL

A special import permit must be obtained in advance of shipment from the Venezuelan Ministry of Agriculture for the importation of plants in soil.

AUTHORIZED PORTS OF ENTRY

Freight shipments are inspected at the maritime ports of Venezuela, or in some cases, at Caracas. Parcel-post shipments are inspected at Caracas, or if consigned elsewhere, at the cities where parcel post service is available.

DISPOSAL OF INFECTED PLANTS

Plants suspected of being diseased are sent to the experiment station near Caracas for inspection. If found to be diseased they may be destroyed, held for observation, or the infected portions removed.

The most feared diseases are the witches'-broom disease (*Marasmius perniciosus* Stahel) and root-rot diseases of cacao (*Theobroma cacao*) apparently caused by *Rosellinia* spp.

LEE A. STRONG,
Chief, Bureau of Entomology & Plant Quarantine.

B. E. P. Q. 500.

PLANT-QUARANTINE IMPORT RESTRICTIONS, MANDATED AUSTRALIAN TERRITORY OF NEW GUINEA

JUNE 28, 1939.

This digest of the plant-quarantine import restrictions of the Mandated Australian Territory of New Guinea has been prepared for the information of nurserymen, plant-quarantine officials, and others interested in the exportation of plants and plant products to that Territory.

It was prepared by Harry B. Shaw, plant quarantine inspector in charge, Foreign Service Information, Division of Foreign Plant Quarantines, from the text

of Quarantine Ordinance No. 3, of March 1931, and proclamations made thereunder.

The information contained in this circular is believed to be correct and complete up to the time of preparation, but it is not intended to be used independently of, nor as a substitute for, the original texts.

LEE A. STRONG,
Chief, Bureau of Entomology and Plant Quarantine.

PLANT-QUARANTINE IMPORT RESTRICTIONS, TERRITORY OF NEW GUINEA

BASIC LEGISLATION

[Statutory Rules No. 8, ch. VII, of January 25, 1927, promulgated under the Quarantine Act 1908-24, as amended, of the Commonwealth of Australia]

[Quarantine Ordinance No. 3, art. 14, March 25, 1931 (parts III and V) of the Territory of New Guinea]

IMPORTATION PROHIBITED

Hay, straw, grass, moss, fiber, charcoal, bark, or other material used as packing material for imported plants, if considered likely to introduce disease, shall be forthwith destroyed. (Regulations effective January 25, 1927, reg. 152.)

Unroasted coffee beans (*Coffea* spp.): Importation prohibited from Java, Malaya, Uganda, and Brazil (Proc. No. 30, December 24, 1932) or from Ivory Coast, Tanganyika, French West Africa, Belgian Congo, and Kenya, except by or through the Director of Agriculture. (Proclamation No. 34, May 25, 1934.)

Tobacco plants (*Nicotiana tabacum* L.): Importation of tobacco plants or parts thereof from Australia prohibited. (Proclamation No. 29, December 24, 1932.)

Banana plants or parts thereof (*Musa* spp.): Importation prohibited to prevent the introduction of "bunchy top" disease. (Proclamation No. 4, February 22, 1926, supplementing proclamation of June 9, 1924.)

IMPORTATION RESTRICTED

Fruits, vegetables (including tubers, bulbs, corms, and rhizomes), nuts, cereals, pulse and other seeds, any proportion of which is found to be or suspected of being affected with a disease, or any cereals, pulse or other seed found on inspection to be mixed with the seed of a weed pest (see p. 6) shall be ordered into quarantine for treatment or sorting if deemed necessary. (Regulations effective January 25, 1927, reg. 161.)

Plants, imported: Entry subject to inspection on arrival, with disposal according to the findings. (Territorial Ordinance No. 3 (pt. V) of March 25, 1931, art. 62, see p. 3.)

Cotton plants (*Gossypium* spp.), cottonseed, unginned cotton, and raw cotton: May be imported under the following conditions only:

1. A written permit from the Director of Agriculture required for each shipment.
2. The imported cottonseed must be accompanied by a certificate of disinfection from the Department of Agriculture and Stock, Queensland. The precautions are designed to prevent the introduction of the pink bollworm, (*Platyedra*) *Gelcchia gossypiella* Saund. (Proclamation No. 7, February 22, 1926.)

Living cultures of bacteria: Importation prohibited unless the written consent of the Administration has first been obtained. (Proclamation No. 8, January 30, 1935.)

GENERAL REGULATIONS

(Promulgated by Territorial Ordinance No. 3, pt. V, March 25, 1931)

IMPORTATION PERMITTED AT AUTHORIZED PORTS ONLY

ART. 58. No person shall import any animals or plants into the Territory except at a port declared to be a port where imported animals or plants may be landed. Proclamation No. 1, February 22, 1926, authorizes the landing of plants at the port of Rabaul.

MOVEMENT OF IMPORTED MATERIALS CONTROLLED

ART. 59. No imported animals or plants, and no hay, straw, fodder, litter, fittings, clothing, utensils, appliances, or packages used on any vessel in connection with imported animals or plants, shall, until released from quarantine, be moved, dealt, or interfered with, except by authority and in accordance with this ordinance and the regulations.

LANDING PERMIT REQUIRED

ART. 60. No imported animals or plants, and no hay, straw, fodder, litter, fittings, clothing, utensils, appliances, or packages used on any vessel in connection with imported animals or plants, shall be landed or removed from the vessel until a permit for their landing or removal from the vessel has been granted by a quarantine officer.

ART. 61. Refers to imported animals.

ARTS. 62 to 64. Relate to the inspection and disposal of imported plants.

DECLARED INSECT PESTS

(Diseases of Plants Proclamation No. 1, June 18, 1938)

- Acrididae, locusts and grasshoppers.
Adoretus spp., white ground grubs.
Agrotis spp., cutworms.
Aleyrodidae, whiteflies or mealywing flies.
Anobiidae, timber borers.
Anobium domesticum=*A. punctatum* (Da G.), furniture beetle.
Anthonomus grandis Boh., mexican cotton-boll weevil.
Aphidae, aphids.
Aspidiotus destructor Sign., transparent coconut scale.
(*Aspidiotus*) *Furcaspis oceanica* (Lindgr.), yellow coconut scale.
Axiagastus campbelli Dist., coconut flower bug.
Biprorulus bibax Breddl., spiny orange bug.
Bostrychidae, timber borers.
Brachartona catoxantha Hamps., coconut leaf moth.
Brontispa froggatti Sharp, coconut leaf hispid.
Brontispa spp., coconut leaf hispids.
Bruchidae, pea and bean weevils.
Bruchophagus funebris=*B. gibbus* (Boh.), alfalfa seed chalcid.
(*Calandra*) *Sitophilus granarius* (L.), grain weevil.
(*Calandra*) *Sitophilus oryza* (L.), grain weevil.
Calandra spp., coconut base borer.
Cautophilus latinasus (Say), short-nosed maize weevil.
Cerambycidae, longicorns.
Ceratitis capitata (Wied.), Mediterranean fruitfly.
Chaetodacus jarvisii, a fruitfly.
Chaetodacus musae, a banana fruitfly.
Chaetodacus tryoni (Frogg.), queensland fruitfly.
Chionaspis citri Comst., citrus white scale.
Chrysomelidae, leaf-eating beetles.
Chrysomphalus aonidum (L.), purple circular scale.
(*Chrysomphalus*) *Aonidiella aurantii* (Mask.), red circular scale.
Coccidae, scale insects and mealybugs.
Coccus spp., black and brown soft scales.
(*Conogethes*) *Dichocrocis punctiferalis* (Guen.), spotted maize moth.
Cosmopolites sordidus (Germ.), banana weevil borer.
Curculionidae, weevils or snout beetles.
Cylas formicarius (F.), sweetpotato weevil.
Dermaptera, earwigs.
Diocalandra taitensis (Guer.), coconut spathe beetle.
Ephestia kuehniella Zell., grain moth.
Ephestia spp., copra and cocoa moths.
Elytroteinus subtruncatus (Fairm.), ginger weevil.
Eriophyes gossypii Banks, cotton leaf blister mite.
Eurytrachelus pilosipes Waterh., coconut stag beetles.
Forficula spp., earwigs.
Galleria mellonella (L.), beeswax moth.
Heliothis obsoleta (F.), corn earworm.
Heliothis spp., maize moths.
(*Hemichionaspis*) *Pinnaspis aspidistrae* (Sign.), coconut scale.
Hesperiidae, leaf rollers.
Isoptera, termites or "white ants."
Lasioderma serricorne (L.), tobacco beetle.
Lecanium spp., black and brown soft scales.
Lepidosaphes gloveri (Pack.), Glover's orange mussel scale.
Leptinotarsa decemlineata (Say), Colorado potato beetle.
Levuana iridescens Bethune-Baker, small coconut leaf moth.
Listroderes (Desiantha) nociva (Lea)=*Listroderes obliquus* Klug, tomato weevil.
Lucanidae, stag beetles.
Lyctus bynnneus Staph., powder-post beetle.
(*Mayetiola*) *Phytophaga destructor* (Say), hessian fly.
Monolepta rosea Blackb., pink-banded rose beetles.
Noctuidae, cutworms and armyworms.
Oncoscelus sulciventris Stal., bronzy orange bug.
Oryctes spp., rhinoceros beetles.
(*Padraona*) *Telicota chrysozona* (Platz), coconut leaf skipper.
Parlatoria pergandii Comst., chaff scale of orange.
Parlatoria zizyphus (Lucas), parlatoria scale of orange.
Phenacaspis dilatata (Green), mango white scale.
(*Phthorimaea*) *Gnorimoschema operculella* (Zell.), potato tuber moth.
Phylloxera (vastatrix) vitifoliae (Fitch), grapevine phylloxera.
(*Platyedra*) *Pectinophora gossypiella* (Saund.), pink bollworm.
Pocillia japonica Newm., Japanese beetle.
Promecotheca spp., coconut leaf hispids.
Pyrausta nubilalis (Hbn.), European corn borer.
Rhabdocnemis obscura (Boisd.), sugarcane weevil borer.
Rhynchophorus ferrugineus (Ol.), red palm weevil.
Rhynchophorus spp., palm weevils.
Rioxa musae (Frogg.), spotted fruitfly.
Saissetia spp., black and brown soft scales.

Scapanes spp., coconut beetles.
 Scarabaeidae, white ground bugs.
 Scolytidae, timber borers.
Serada spp., coconut tree hopper.
Sitotroga cerealella (Oliv.), grain moths.
Sminthurus spp., plant "fleas."
 Sphingidae, hawk moths.
Stephanoderes hampei (Ferr.), coffee berry borer.
Tetranychus spp., red spiders.
 Tettigoniidae, long-horned locusts.
Thosca cinereomarginata Banks, coconut leaf caterpillar.
 Thysanoptera, thrips.
Tirathaba rufigena (Wlk.), spathe moth borer.
Tribolium castaneum (Hbst.), ferrugineum (Fab.), flour beetle.
Trichogomphus semmelinki Rits, Solomon Island rhinoceros beetle.
 Trypetidae, fruitflies.
Xylotrupes spp., elephant beetles.

Cladosporium citri=*Elsinoe fawcetti* Bitanc. and Jenk.
Diplodia spp., pod rot of cocoa.
 Fungi and bacteria, potato storage rots.
Fusarium cubense E. F. S.
Hemileia vastatrix B. and Br., coffee leaf disease.
Heterodera radiculicola, eelworm or nematode.
 Nematoda, celworms.
 Peronosporaceae, downy mildews.
Phoma citricarpa McAlp., black spot of orange.
Pseudomonas citri=*Bacterium citri* (Hasse), Doidge, citrus canker.
Phytophthora spp., cocoa canker and pod rot.
Rhizoctonia bataticola (Taub.) Butler.
Spongospora subterranea (Wärlr.), T. Johnson.
Ustilago shiraiana P. Henn.

WEEDS

PLANT DISEASES

Actinomyces scabies (Thax.) Gus., potato scab.
Bacterium solanacearum E. F. S., brown rot of potato.
 Bleeding disease of coconut.
 Bud rot of coconut.
 Bunchy top of banana.
Cercospora musae Zimm., sigatoka disease of banana.

Cuscuta spp., dodder.
Cyperus rotundus, nutgrass.
Imperata arundinacea, kunai.
Mimosa pudica, sensitive plant.
Sida spp., sida weed.
Stachytarpheta indica, blue rattail.
Tagetes glandulifera, stinking roger.
Triumfetta rhomboidea, Chinese burr.
Xanthium pungens, noogoora burr.
Xanthium spinosum, Bathurst burr.

PENALTIES IMPOSED FOR VIOLATIONS OF THE PLANT QUARANTINE ACT

According to reports received by the Bureau during the period April 1 to June 30, 1939, penalties have recently been imposed by the proper authorities for violations of the Plant Quarantine Act, as follows:

AVOCADO SEED QUARANTINE

In the case of the *United States v. Roberto Lerma*, who was apprehended attempting to wade the Rio Grande in the vicinity of Brownsville, Tex., with 58 avocados with seeds in his possession, the defendant pleaded guilty and was sentenced to 90 days in jail.

JAPANESE BEETLE QUARANTINE

In the case of the *United States v. Ashly Turner*, Exmore, Va., for transporting from Hopeton, Va., to a point outside of the regulated area, 100 barrels of sweetpotatoes, without certification, the defendant pleaded guilty and was fined \$25.

In the case of the *United States v. the Coastal Trucking Corporation*, Exmore, Va., for transporting from Hopeton, Va., to a point outside of the regulated area, 100 barrels of sweetpotatoes, without certification, the defendant pleaded guilty and was fined \$25.

QUARANTINES AFFECTING MEXICAN PRODUCTS

In the case of the United States versus the persons listed below, for attempting to smuggle in contraband plant material, the penalties indicated were imposed by the United States customs officials at the following ports:

Name	Port	Contraband	Penalty
Chas. Rivera	San Ysidro, Calif.	8 mangoes	\$1.00
Tony Gomez	Brownsville, Tex.	8 plants	1.00
Mike Martinez	do.	1 mango	1.00
Justo Gatico	do.	2 avocado seed	1.00
Miss Marion G. Cheney	do.	1 mango and 1 sweet lime	1.00
Mrs. Victoria Johnson	do.	3 plants	1.00
Victoria Zapata	do.	2 plants	1.00
Elisa Medrano	do.	do	1.00
P. G. Villareal	do.	6 plants	1.00
Micaela Juarez	do.	1 gardenia plant	1.00
Mercedes N. Roque	do.	3 mangoes	.50
James Westfall	do.	1 plant	1.00
Felicitas Martinez Vd. Rodriguez	do.	12 plants and 1 avocado	1.00
Amparo Sanchez	do.	1 avocado seed	1.00
Juan S. Padillo	do.	1 mango	1.00
Mrs. Leonora Villareal	do.	1 avocado seed	1.00
Antonio Galvan	do.	12 plants	1.00
Mrs. Mary Brisne	do.	2 mangoes	1.00
Irene Garcia de Cisneros	do.	2 plants	1.00
Mrs. Carmen Garcia	do.	1 mango	1.00
Santiago Montilongo	do.	do	1.00
Eloise Saldania	do.	3 mangoes	1.00
Maria Davila	do.	1 avocado	1.00
Mrs. Pilar Benavides	do.	3 avocado seed and 1 mango seed	1.00
Lucia Benavides	do.	2 mangoes	1.00
Juan Balli	do.	4 mangoes	1.00
Bill Herod	do.	12 avocados	1.00
Josa Guarjardo	do.	1 mango	1.00
Esperanza Garcia	do.	2 mangoes	1.00
Patricio Castillo	do.	1 mango	1.00
N. G. Rodriguez	Eagle Pass, Tex.	2 avocados	1.00
Mrs. Ramona Duque de Lopez	do.	1 plant	1.00
Marin Cabrera	El Paso, Tex.	3 stalks sugarcane, 3 mangoes, 3 avocados, 3 guavas, 2 sapotes.	1.00
Selvina Padilla de Romero	do.	2 plants	.25
Paul Aldrich	do.	6 cacti, 2 sapotes, 4 avocados	1.00
Walter Mayfield	do.	4 mangoes and 1 avocado	1.00
Andres Gomez	do.	1 avocado seed	1.00
Josefa Castro de Martinez	do.	15 plants	1.00
Amelia Lozano de Montes	do.	1 mango	1.00
Ramon Garcia	Hidalgo, Tex.	1 avocado	1.00
Inocencio Medrano	do.	4 avocado seed	1.00
Tibucio Mendrano	do.	30 plants	10.00
Francesco Medrano	do.	1 avocado seed	1.00
Albert Rutledge	do.	3 avocados	1.00
Jose Castellano	do.	do	1.00
Fernando Guerro	do.	7 avocados	2.00
Tomas Sanchez	do.	1 mango	1.00
Emilio Galindo	do.	2 mangoes	1.00
Rudolfo Murillo	do.	11 plants	3.00
Jose Lopez	do.	1 avocado seed	1.00
H. J. Carlson	Laredo, Tex.	2 cactus plants	1.00
Mr. Westthimer	do.	1 grapefruit and 1 mango	1.00
Leo Padilla	do.	10 mangoes, 4 sapotes, and 1 mamey.	1.00
Adrian Patino	do.	1 orange	1.00
Julio Martinez	do.	4 mangoes and 1 orange	1.00
Luz Cabares	do.	4 avocados with seed	1.00
Jose Rodriguez	do.	6 oranges	1.00
Juan Cisneros	do.	1 avocado with seed	1.00
Mrs. Mercedes de Visemonteo	do.	2 avocados	1.00
Maria Ninfa Rodriguez	do.	2 mangoes	1.00
Dolores Vega	do.	25 plants	1.00
Nasario Garcia Diaz	do.	10 avocados	1.00
Leon de la Garza	do.	1 mamey	1.00
Glaz Garviaz	do.	3 avocados	1.00
Ismael Rangel	do.	6 stalks sugarcane	1.00
A. Barrera	do.	1 orange	1.00
Isabel Hernandez de Monjaras	do.	4 avocados	1.00
Perales Vda. de Cabillo	do.	2 mangoes	1.00
Josefa Laurez	do.	1 plant	1.00
Wayne D. Phillips	do.	6 oranges	1.00
Paula Garza Alvarez	do.	1 avocado seed	1.00
C. Castillo	do.	1 mamey	1.00
Apolonia Olivia	do.	4 avocados	1.00
Mrs. O. S. Mendiola	do.	2 mangoes	1.00
Maria Lopez	do.	1 mango and 5 plums	1.00
Juan Barrera	do.	1 plant	1.00
Elena Zuazua	do.	3 mangoes	1.00
Ralph Mendez	do.	3 avocados	1.00
Jose Marino	do.	2 mangoes	1.00
Mrs. H. C. Shankle	do.	11 avocados and 6 apples	1.00

Name	Port	Contraband	Penalty
Alfredo Muillo	Laredo, Tex.	4 mameys	\$1.00
Jose Galendo	do.	3 mangoes	1.00
Mrs. Paula Monsora	do.	1 mango	1.00
Margarita Garza	do.	10 oranges	1.00
Jose Angel Espinoza	do.	12 avocados with seeds	1.00
Cecilo Gonzalez	do.	1 orange	1.00
Mrs. R. M. Arroya	do.	1 mango	1.00
Mrs. Consuelo Hernandez	do.	5 mangoes, 2 mameys, 2 avocados, and 3 oranges	1.00
Arturo Gonzalez	do.	1 plant and 40 papaya seed	1.00
Catalina H. de Garcia	do.	27 plants	1.00
Mrs. C. D. Croselmire	do.	4 oranges, 3 pears, and 2 apples	1.00
Dario Gutierrez	do.	8 avocados	1.00
Mrs. Eulodia Valdez	do.	2 oranges	1.00
Florin da M. Martinez	do.	46 plant cuttings	1.00
Cecelio Salas	do.	1 mango	1.00
Manuel Serna	do.	1 mango	1.00
Refugio Molena	do.	1 avocado	1.00
Santiago Vasquez	do.	do	1.00
Jose Aguilar	do.	5 avocados and 5 mangoes	1.00
Helen Saldama	do.	2 avocados and 1 mamey	1.00
Alfred Piza	do.	1 orange	1.00
Mrs. Maria A. Perez	do.	2 mangoes	1.00
Daniel Rocha	do.	4 avocados	1.00
M. E. Rodriguez	do.	16 avocados	1.00
Paula M. DeAmador	do.	2 avocados and 1 mango	1.00
Maria del Refugio	do.	1 orange and 2 mangoes	1.00
Santos Martinez	do.	1 mango	1.00
Armando Ayala	do.	8 avocados	1.00
Mrs. Otila Montemayor	do.	3 plants	1.00
A. Heredia	do.	14 mangoes	2.00
E. Perales	do.	6 mangoes	1.00
Mrs. Juan Farias	do.	2 avocados	1.00
Avilino Ramos	do.	5 plants	1.00
Cresencia Cisneros	do.	5 mangoes	1.00
Gustavo Gallardo	do.	6 oranges and 1 mango	1.00
Jesse Benavides	do.	2 mangoes	1.00
Mrs. Angelica Valesco	do.	do	1.00
W. W. Pratt	do.	do	1.00
Mrs. M. Garza	do.	1 mango	1.00
Juan Rubio	do.	2 mangoes	1.00
Mrs. Angela Rodriguez	do.	1 jobo plum	1.00
Mrs. Maria Gomez	do.	1 mango	1.00
Flamencio Munos	do.	2 mangoes	1.00
Jack Ostos	do.	9 mangoes	1.00
Ramon Gonzales	do.	1 mango	1.00
Catalina Vargas	do.	1 gladiolus bulb	1.00
Dolores Cortez	do.	3 mangoes	1.00
Philip Fuentes	do.	6 fig plants	1.00
Nicklas Martinez	do.	7 plants	1.00
Hortencia Molina	do.	1 mango	1.00
Othon Serna	do.	1 pear	1.00
Francisco Landeros	do.	1 mango	1.00
S. Guzman, Jr	do.	7 mangoes	2.00
Mrs. Maria Anderson	do.	1 avocado seed	1.00
A. Hernandez	do.	1 mango and 3 mameys	1.00
M. Hernandez	do.	4 mangoes	1.00
Mrs. Conception Mendiosa	do.	2 mangoes	1.00
Charlie Deligrini	do.	2 plants	1.00
Maria de Refugio Garza	do.	1 mango and 1 plum	1.00
M. Villareal	do.	10 ears corn	1.00
Josefa Mata	do.	1 mango	1.00
H. B. Barber	do.	8 avocados with seed	1.00
Jacobo Brushlowski	do.	1 apple	1.00
M. P. Garcia	do.	5 apples and 3 plants	1.00
Augustin B. Jiminez	do.	1 mango	1.00
Jiminez Bruno	do.	19 peaches	1.00
Juan Canado	do.	25 plants	1.00
Cerna de Saucedo	do.	1 mango	1.00
Maria de Jesus Peralta	do.	2 mangoes	1.00

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